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17.1 PVC INSULATED WIRING IN PVC CASING CAPPING

| Code No | Description | Unit | Rates in Rs. | | |
|----------|---|----------|--------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.1.1 | Wiring of light point / fan point / exhaust fan point / call bell point with 1.5 sq. mm FR PVC insulated unsheathed 1.1kV grade flexible copper conductor and 1.5 sq.mm FR PVC insulated copper earth conductor (IS:694) of approved make in double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers , making connections, testing etc. as required. | | | | |
| 17.1.1.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 188.70 | 170.00 |
| 17.1.1.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 312.80 | 282.20 |
| 17.1.1.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 438.60 | 394.40 |
| 17.1.2 | Wiring of twin control point with 1.5 sq. mm FR PVC insulated unsheathed 1.1kV grade flexible copper conductor and 1.5 sq.mm FR PVC insulated copper earth conductor (IS:694) of approved make in double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers , making connections, testing etc. as required. | | | | |
| 17.1.2.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 212.50 | 190.40 |
| 17.1.2.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 394.40 | 357.00 |
| 17.1.2.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 494.70 | 448.80 |
| 17.1.3 | Wiring of 3 pin 6 amp. Light plug point with 1.5 sq. mm FR PVC insulated unsheathed 1.1 kV grade flexible copper conductor and 1.0 sq.mm FR PVC insulated unsheathed 1.1 kV grade copper earth conductor (IS:694) of approved make double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.1.3.1 | On board | P.point | 10.00 | 81.60 | 69.70 |

| Code No | Description | Unit | Rates in Rs. | | |
|----------|--|----------|--------------|--------------|--------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.1.3.2 | Short point (up to 3 mtr.) | P. point | 30.00 | 239.70 | 221.00 |
| 17.1.3.3 | Medium point (up to 6 mtr.) | P. point | 40.00 | 363.80 | 333.20 |
| 17.1.3.4 | Long point (up to 10 mtr..) | P. point | 50.00 | 489.60 | 445.40 |
| 17.1.4 | P&F following size double lock / ISI marked single lock PVC casing capping & it's accessories like coupler, inner, outer, elbow , square box, tee etc. with screws, PVC expansion fasteners as required. | | | | |
| 17.1.4.1 | 20 mm x 12 mm | R. mtr. | 4.00 | 16.00 | 14.00 |
| 17.1.4.2 | 25 mm x 12 mm | R. mtr. | 4.00 | 26.00 | 23.00 |
| 17.1.4.3 | 32 mm x 12 mm | R. mtr. | 5.00 | 30.00 | 25.00 |
| 17.1.4.4 | 38 mm x 18.5mm | R. mtr. | 5.00 | 39.00 | 31.00 |
| 17.1.4.5 | 50 mm x 20mm | R. mtr. | 6.00 | 57.00 | 47.00 |
| 17.1.5 | Wiring of light point / fan point / exhaust fan point/ call bell point with 1.5 sq. mm PVC insulated stranded/ solid aluminium conductor 1.1 kV grade and 2.5 sq.mm PVC insulated aluminium earth conductor (IS:694) of approved make double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 swg M.S.box with earth terminal, 6 A switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.1.5.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 166.60 | 149.60 |
| 17.1.5.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 265.20 | 239.70 |
| 17.1.5.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 372.30 | 336.60 |
| 17.1.6 | Wiring of twin control light point with 1.5 sq. mm PVC insulated stranded/ solid aluminium conductor 1.1kV grade and 2.5 sq.mm PVC insulated aluminium earth conductor (IS:694) of approved make in double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.1.6.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 180.20 | 161.50 |
| 17.1.6.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 336.60 | 304.30 |
| 17.1.6.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 416.50 | 377.40 |

| Code No | Description | Unit | Rates in Rs. | | |
|----------|--|----------|--------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.1.7 | Wiring of 3 pin 6 amp. Light plug point with 1.5 sq. mm PVC insulated stranded/ solid aluminium conductor and 2.5 sq.mm PVC insulated aluminium earth conductor (IS:694) of approved make double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.1.7.1 | On board | P. point | 10.00 | 81.60 | 69.70 |
| 17.1.7.2 | Short point (up to 3 mtr.) | P. point | 30.00 | 217.60 | 200.60 |
| 17.1.7.3 | Medium point (up to 6 mtr.) | P. point | 40.00 | 316.20 | 290.70 |
| 17.1.7.4 | Long point (up to 10 mtr..) | P. point | 50.00 | 423.30 | 387.60 |
| NOTE1 | For Conductor group classification refers list of makes. | | | | |
| NOTE2 | Increase rate of point wiring for FRLS PVC by 5.0% and for ZHFR (non PVC) by 16.0% in place of FR PVC. | | | | |
| NOTE3 | Wiring with items of Group1 and 2 shall be with all component of Group1 and 2 respectively. | | | | |
| NOTE4 | The rates are for flush type/ PC series , for using semi modular PC series accessories, rate shall be increased 3% in point wiring rate and for using modular PC series accessories, rate shall be increased 20% in point wiring rate. | | | | |

17.2 PVC INSULATED WIRING IN PVC CONDUIT

| Code No | Description | Unit | Rate in Rs. | | |
|----------|---|----------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.2.1 | Wiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.2.1.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 222.70 | 202.30 |
| 17.2.1.2 | Medium point (up to 6 mtr.) | P. point | 30.00 | 394.40 | 358.70 |
| 17.2.1.3 | Long point (up to 10 mtr..) | P. point | 40.00 | 578.00 | 525.30 |
| 17.2.2 | Wiring of twin control light point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.2.2.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 244.80 | 222.70 |
| 17.2.2.2 | Medium point (up to 6 mtr.) | P. point | 30.00 | 443.70 | 401.20 |
| 17.2.2.3 | Long point (up to 10 mtr..) | P. point | 40.00 | 647.70 | 588.20 |
| 17.2.3 | Wiring of 3 pin 5 amp. light plug point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.2.3.1 | On board | P. point | 10.00 | 81.60 | 69.70 |
| 17.2.3.2 | Short point (up to 3 mtr.) | P. point | 30.00 | 273.70 | 253.30 |
| 17.2.3.3 | Medium point (up to 6 mtr.) | P. point | 35.00 | 445.40 | 409.70 |

| Code No | Description | Unit | Rate in Rs. | | |
|----------|--|----------|-------------|--------------|--------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.2.3.4 | Long point (up to 10 mtr..) | P. point | 45.00 | 629.00 | 576.30 |
| 17.2.4 | S&F following sizes (dia.) of ISI marked medium duty PVC conduit along with accessories in surface / recessed using saddles, clamps, fastener as required including cutting the wall and making good the same as required. | | | | |
| 17.2.4.1 | 20 mm | R. mtr. | 5.00 | 21.00 | 19.00 |
| 17.2.4.2 | 25 mm | R. mtr. | 5.00 | 29.00 | 21.00 |
| 17.2.4.3 | 32 mm | R. mtr. | 6.00 | 44.00 | 36.00 |
| 17.2.4.4 | 40 mm | R. mtr. | 6.00 | 64.00 | 46.00 |
| 17.2.4.5 | 50 mm | R. mtr. | 7.00 | 88.00 | 57.00 |
| 17.2.5 | Wiring of light point/fan point/ exhaust fan point/ call bell point with 1.5 sq. mm PVC insulated unsheathed solid / stranded aluminium conductor 1.1 kV grade and 2.5 sq.mm PVC insulated unsheathed solid / stranded aluminium earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.2.5.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 187.00 | 170.00 |
| 17.2.5.2 | Medium point (up to 6 mtr.) | P. point | 30.00 | 338.30 | 306.00 |
| 17.2.5.3 | Long point (up to 10 mtr..) | P. point | 40.00 | 489.60 | 443.70 |
| 17.2.6 | Wiring of twin control light point with 1.5 sq.mm PVC insulated unsheathed solid / stranded aluminium conductor 1.1 kV grade and 2.5 sq.mm PVC insulated unsheathed solid / stranded aluminium earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.2.6.1 | Short point (up to 3 mtr.) | P. point | 25.00 | 212.50 | 190.40 |
| 17.2.6.2 | Medium point (up to 6 mtr.) | P. point | 30.00 | 374.00 | 338.30 |
| 17.2.6.3 | Long point (up to 10 mtr..) | P. point | 40.00 | 550.80 | 499.80 |

| Code No | Description | Unit | Rate in Rs. | | |
|----------|--|----------|-------------|----------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.2.7 | Wiring of 3 pin 6 amp. Light plug point with 1.5 sq. mm PVC insulated unsheathed solid / stranded aluminium conductor 1.1 kV grade and 2.5 sq.mm PVC insulated unsheathed solid / stranded aluminium earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required. | | | | |
| 17.2.7.1 | On board | P. point | 10.00 | 81.60 | 69.70 |
| 17.2.7.2 | Short point (up to 3 mtr.) | P. point | 30.00 | 238.00 | 221.00 |
| 17.2.7.3 | Medium point (up to 6 mtr.) | P. point | 35.00 | 389.30 | 357.00 |
| 17.2.7.4 | Long point (up to 10 mtr..) | P. point | 45.00 | 540.60 | 494.70 |
| 17.2.8 | Wiring of 6 pin 15 amp. Light power point with 4.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked pvc conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.2.8.1 | Short point (up to 3 mtr.) | P. point | | 411.00 | |
| 17.2.8.2 | Medium point (up to 6 mtr.) | P. point | | 684.00 | |
| 17.2.8.3 | Long point (up to 10 mtr..) | P. point | | 1048.00 | |
| 17.2.89 | Wiring of 6 pin 15 amp. Light power point with 6.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked pvc conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.2.9.1 | Short point (up to 3 mtr.) | P. point | | 492.00 | |
| 17.2.9.2 | Medium point (up to 6 mtr.) | P. point | | 846.00 | |
| 17.2.9.3 | Long point (up to 10 mtr..) | P. point | | 1,318.00 | |
| NOTE1 | For Conductor group classification refers list of makes. | | | | |
| NOTE2 | Increase rate of point wiring for FRLS PVC by 4.0% and for ZHFR (non pvc) by 15% in place of FR PVC. | | | | |
| NOTE3 | Wiring with items of Group1 and 2 shall be with all component of Group1 and 2 respectively. | | | | |
| NOTE4 | The rates are for flush type/ PC series, for using semi modular PC series accessories, rate shall be increased 3% in point wiring rate and for using modular PC series accessories, rate shall be increased 20% in point wiring rate. | | | | |

17.3 PVS INSULATED WIRING IN STEEL CONDUIT

| Code No | Description | Unit | Rate in Rs. | | |
|----------|---|----------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.3.1 | Wiring of light point/fan point / exhaust fan point/ call bell point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible earth copper conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes check nuts, making connections, testing etc. as required. | | | | |
| 17.3.1.1 | Short point (up to 3 mtr.) | P. point | 30.00 | 280.50 | 253.30 |
| 17.3.1.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 545.70 | 494.70 |
| 17.3.1.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 763.30 | 693.60 |
| 17.3.2 | Wiring of twin control light point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.3.2.1 | Short point (up to 3 mtr.) | P. point | 30.00 | 280.50 | 273.70 |
| 17.3.2.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 593.30 | 537.20 |
| 17.3.2.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 809.20 | 734.40 |
| 17.3.3 | Wiring of 3 pin 6 amp. Light plug point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade(IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.3.3.1 | On board | P. point | 10.00 | 81.60 | 69.70 |
| 17.3.3.2 | Short point (up to 3 mtr.) | P. point | 35.00 | 331.50 | 304.30 |
| 17.3.3.3 | Medium point (up to 6 mtr.) | P. point | 40.00 | 596.70 | 545.70 |

| Code No | Description | Unit | Rate in Rs. | | |
|----------|--|----------|-------------|---------------|---------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.3.3.4 | Long point (up to 10 mtr..) | P. point | 50.00 | 814.30 | 744.60 |
| 17.3.4 | S&F following sizes of ISI marked steel conduit along with heavy duty accessories in surface /recessed using saddles, clamps, fasteners as required including cutting the wall and making good the same as required. | | | | |
| 17.3.4.1 | 20 mm | R. mtr. | 6.00 | 47.00 | 41.00 |
| 17.3.4.2 | 25 mm | R. mtr. | 6.00 | 55.00 | 50.00 |
| 17.3.4.3 | 32 mm | R. mtr. | 8.00 | 94.00 | 84.00 |
| 17.3.4.4 | 40 mm | R. mtr. | 8.00 | 137.00 | 123.00 |
| 17.3.4.5 | 50 mm | R. mtr. | 9.00 | 188.00 | 170.00 |
| 17.3.5 | Wiring of light point/fan point/ exhaust fan point/ call bell point with 1.5 sq. mm PVC insulated unsheathed solid / stranded aluminium conductor 1.1 kV grade and 2.5 sq.mm PVC insulated unsheathed solid / stranded aluminium earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.3.5.1 | Short point (up to 3 mtr.) | P. point | 30.00 | 236.30 | 214.20 |
| 17.3.5.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 460.70 | 418.20 |
| 17.3.5.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 647.70 | 586.50 |
| 17.3.6 | Wiring of twin control light point with 1.5 sq. mm PVC insulated unsheathed solid / stranded aluminium conductor 1.1 kV grade and 2.5 sq.mm PVC insulated unsheathed solid / stranded aluminium earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.3.6.1 | Short point (up to 3 mtr.) | P. point | 30.00 | 255.00 | 231.20 |
| 17.3.6.2 | Medium point (up to 6 mtr.) | P. point | 35.00 | 499.80 | 452.20 |
| 17.3.6.3 | Long point (up to 10 mtr..) | P. point | 45.00 | 681.70 | 618.80 |

| Code No | Description | Unit | Rate in Rs. | | |
|----------|--|----------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.3.7 | Wiring of 3 pin 6 amp. Light plug point with 1.5 sq. mm PVC insulated unsheathed solid / stranded aluminium conductor 1.1 kV grade and 2.5 sq.mm PVC insulated unsheathed solid / stranded aluminium earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.3.7.1 | On board | P. point | 10.00 | 81.60 | 69.70 |
| 17.3.7.2 | Short point (up to 3 mtr.) | P. point | 35.00 | 287.30 | 265.20 |
| 17.3.7.3 | Medium point (up to 6 mtr.) | P. point | 40.00 | 511.70 | 469.20 |
| 17.3.7.4 | Long point (up to 10 mtr..) | P. point | 50.00 | 698.70 | 637.50 |
| 17.3.8 | Wiring of 6 pin 15 amp. Light power point with 4.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked steel conduit & it's accessories, 18 SWG M.S. box with earth terminal, screw less cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.3.8.1 | Short point (up to 3 mtr.) | P. point | | 554.00 | |
| 17.3.8.2 | Medium point (up to 6 mtr.) | P. point | | 986.00 | |
| 17.3.8.3 | Long point (up to 10 mtr..) | P. point | | 1562.00 | |
| 17.3.9 | Wiring of 6 pin 15 amp. Light power point with 6.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked steel conduit & it's accessories, 18 SWG M.S. box with earth terminal, screw less cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required. | | | | |
| 17.3.9.1 | Short point (up to 3 mtr.) | P. point | | 587.00 | |
| 17.3.9.2 | Medium point (up to 6 mtr.) | P. point | | 1052.00 | |
| 17.3.9.3 | Long point (up to 10 mtr..) | P. point | | 1672.00 | |
| NOTE1 | For Conductor group classification refers list of makes. | | | | |
| NOTE2 | Increase rate of point wiring for FRLS PVC by 3.0% and for ZHFR non PVC by 10.0% in place of FR PVC. | | | | |
| NOTE3 | Wiring with items of Group1 and 2 shall be with all component of Group1 and 2 respectively. | | | | |
| NOTE4 | The rates are for flush type/ PC series , for using semi modular PC series accessories, rate shall be increased 3% in point wiring rate and for using modular PC series accessories, rate shall be increased 20% in point wiring rate. | | | | |
| NOTE5 | If wiring is done in GI Conduit,the rates will be increased by 20% | | | | |

17.4 DRAWING OF WIRES & SUBMAINS

| Code No. | Description | Unit | Rates in Rs. | | |
|-----------|---|------|--------------|---------------|---------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.4.1 | Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required. | | | | |
| 17.4.1.1 | 1 x 1.5 sq.mm | Mtr. | 1.00 | 13.22 | 12.06 |
| 17.4.1.2 | 2 x 1.5 sq.mm | Mtr. | 1.50 | 25.40 | 23.32 |
| 17.4.1.3 | 3x 1.5 sq.mm | Mtr. | 2.25 | 38.10 | 34.97 |
| 17.4.1.4 | 4 x 1.5 sq.mm | Mtr. | 3.00 | 50.81 | 46.63 |
| 17.4.1.5 | 6 x 1.5 sq.mm | Mtr. | 3.50 | 73.08 | 66.98 |
| 17.4.1.6 | 1 x 2.5 sq.mm | Mtr. | 1.00 | 19.14 | 17.75 |
| 17.4.1.7 | 2 x 2.5 sq.mm | Mtr. | 1.50 | 37.58 | 34.27 |
| 17.4.1.8 | 2 x 2.5 sq. mm. + 1x1.5sqmm | Mtr. | 2.25 | 48.02 | 43.67 |
| 17.4.1.9 | 3 x 2.5 sq.mm | Mtr. | 2.25 | 56.30 | 51.50 |
| 17.4.1.10 | 4 x 2.5 sq.mm | Mtr. | 3.00 | 74.99 | 68.56 |
| 17.4.1.11 | 6 x 2.5 sq.mm | Mtr. | 5.00 | 110.14 | 100.57 |
| 17.4.1.12 | 1 x 4.0 sq.mm | Mtr. | 1.50 | 29.23 | 26.62 |
| 17.4.1.13 | 2 x 4.0 sq.mm | Mtr. | 2.00 | 56.38 | 51.68 |
| 17.4.1.14 | 3 x 4 sq. mm. | Mtr. | 3.00 | 84.56 | 77.26 |
| 17.4.1.15 | 4 x 4.0 sq.mm | Mtr. | 4.00 | 112.75 | 103.01 |
| 17.4.1.16 | 6 x 4.0 sq.mm | Mtr. | 5.00 | 167.21 | 152.95 |
| 17.4.1.17 | 2 x 4.0 sq.mm+1x 2.5 sq. mm. | Mtr. | 2.50 | 74.82 | 68.90 |
| 17.4.1.18 | 1 x 6.0 sq.mm | Mtr. | 1.50 | 44.20 | 40.37 |
| 17.4.1.19 | 2 x 6.0 sq.mm | Mtr. | 3.00 | 87.87 | 80.90 |
| 17.4.1.20 | 3 x 6.0 sq. mm. | Mtr. | 3.75 | 131.20 | 119.88 |
| 17.4.1.21 | 4 x 6.0 sq.mm | Mtr. | 4.00 | 173.30 | 158.16 |
| 17.4.1.22 | 2 x 6.0 sq. mm. + 1 x 2.5 sq. mm. | Mtr. | 3.50 | 107.18 | 97.79 |
| 17.4.1.23 | 1 x 10.0 sq.mm | Mtr. | 2.00 | 66.82 | 57.42 |
| 17.4.1.24 | 2 x 10.0 sq.mm | Mtr. | 3.00 | 139.37 | 126.67 |
| 17.4.1.25 | 4 x 10.0 sq.mm | Mtr. | 5.00 | 279.27 | 251.60 |
| 17.4.1.26 | 1 x 16.0 sq.mm | Mtr. | 3.00 | 109.27 | 99.18 |
| 17.4.1.27 | 2 x 16.0 sq.mm | Mtr. | 5.00 | 216.63 | 196.62 |
| 17.4.1.28 | 4 x 16.0 sq.mm | Mtr. | 8.00 | 428.74 | 389.76 |

| Code No. | Description | Unit | Rates in Rs. | | |
|-----------|---|------|--------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.4.2 | Supplying and drawing PVC insulated and unsheathed stranded/ solid ISI marked aluminium conductor (IS:694) of 1.1kV grade of approved make in existing surface or recessed conduit/casing capping including making connections etc. as required. | | | | |
| 17.4.2.1 | 1 x 1.5 sq.mm | Mtr. | 1.00 | 4.64 | 4.32 |
| 17.4.2.2 | 2 x 1.5 sq.mm | Mtr. | 1.50 | 8.48 | 8.00 |
| 17.4.2.3 | 3 x 1.5 sq.mm | Mtr. | 2.25 | 12.64 | 11.84 |
| 17.4.2.4 | 4 x 1.5 sq.mm | Mtr. | 3.00 | 16.80 | 15.84 |
| 17.4.2.5 | 6 x 1.5 sq.mm | Mtr. | 3.50 | 22.56 | 21.28 |
| 17.4.2.6 | 1 x 2.5 sq.mm | Mtr. | 1.00 | 6.24 | 5.76 |
| 17.4.2.7 | 2 x 2.5 sq.mm | Mtr. | 1.50 | 11.52 | 10.88 |
| 17.4.2.8 | 3 x 2.5 sq.mm | Mtr. | 2.25 | 17.44 | 16.32 |
| 17.4.2.9 | 4 x 2.5 sq.mm | Mtr. | 3.00 | 23.20 | 21.76 |
| 17.4.2.10 | 6 x 2.5 sq.mm | Mtr. | 5.00 | 33.76 | 30.88 |
| 17.4.2.11 | 1 x 4.0 sq.mm | Mtr. | 1.50 | 8.80 | 8.32 |
| 17.4.2.12 | 2 x 4.0 sq.mm | Mtr. | 2.00 | 16.00 | 15.04 |
| 17.4.2.13 | 3 x 4.0 sq. mm. | Mtr. | 3.00 | 24.16 | 22.40 |
| 17.4.2.14 | 4 x 4.0 sq.mm | Mtr. | 4.00 | 32.16 | 29.92 |
| 17.4.2.15 | 6 x 4.0 sq.mm | Mtr. | 5.00 | 44.80 | 43.36 |
| 17.4.2.16 | 2 X 4.0 sq. mm. + 1 X 2.5 sq. mm. | Mtr. | 2.50 | 22.08 | 20.32 |
| 17.4.2.17 | 1 x 6.0 sq.mm | Mtr. | 1.50 | 11.36 | 10.88 |
| 17.4.2.18 | 2 x 6.0 sq.mm | Mtr. | 3.00 | 22.88 | 21.44 |
| 17.4.2.19 | 2 X 6.0 sq. mm. + 1 X 2.5 sq. mm. | Mtr. | 3.50 | 28.64 | 26.72 |
| 17.4.2.20 | 3 x 6.0 sq. mm. | Mtr. | 3.50 | 33.76 | 31.36 |
| 17.4.2.21 | 4 x 6.0 sq.mm | Mtr. | 4.00 | 45.60 | 42.08 |
| 17.4.2.22 | 1 x 10.0 sq.mm | Mtr. | 2.00 | 17.12 | 16.00 |
| 17.4.2.23 | 2 x 10.0 sq.mm | Mtr. | 3.00 | 32.96 | 30.56 |
| 17.4.2.24 | 4 x 10.0 sq.mm | Mtr. | 5.00 | 64.16 | 59.52 |
| 17.4.3 | Supplying and drawing PVC jacketed with annealed bare copper inner conductor & tinned copper conductor shielding foam PE dielectric coaxial cable of approved make in existing surface or recessed conduit/casing capping including making connections as required. | | | | |
| 17.4.3.1 | RG - 6 | Mtr. | 1.50 | 20.40 | 17.04 |

| Code No. | Description | Unit | Rates in Rs. | | |
|-----------|--|------|--------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.4.3.2 | RG -11 | Mtr. | 1.50 | 41.16 | 38.40 |
| 17.4.4 | Supplying and drawing PVC/ Polythene insulated and PVC sheathed unarmoured/ armoured telephone cable with 0.5 mm dia. Tinned / annealed copper conductor taped & confirming to ITD specification S/WT-129C of approved make in existing surface or recessed conduit/casing capping. | | | | |
| 17.4.4.1 | Unarmoured | | | | |
| 7.4.4.1.1 | 1 pair | Mtr. | 1.00 | 6.72 | 5.04 |
| 7.4.4.1.2 | 2 pair | Mtr. | 1.00 | 9.36 | 7.08 |
| 7.4.4.1.3 | 3 pair | Mtr. | 1.50 | 12.72 | 10.20 |
| 7.4.4.1.4 | 4 pair | Mtr. | 1.50 | 16.32 | 13.08 |
| 7.4.4.1.5 | 5 pair | Mtr. | 3.00 | 18.72 | 16.68 |
| 7.4.4.1.6 | 10 pair | Mtr. | 5.00 | 36.36 | 30.24 |
| 7.4.4.1.7 | 20 pair | Mtr. | 8.00 | 67.56 | 55.92 |
| 7.4.4.1.8 | 50 pair | Mtr. | 10.00 | 141.72 | 120.60 |
| 7.4.4.1.9 | 100 pair | Mtr. | 12.00 | 266.88 | 228.24 |
| 17.4.4.2 | Jelly filled armoured (PIJF) | | | | |
| 7.4.4.2.1 | 5 pair | Mtr. | 6.00 | 77.52 | 45.84 |
| 7.4.4.2.2 | 10 pair | Mtr. | 8.00 | 99.36 | 51.00 |
| 7.4.4.2.3 | 20 pair | Mtr. | 10.00 | 130.68 | 79.68 |
| 7.4.4.2.4 | 50 pair | Mtr. | 16.00 | 244.08 | 175.20 |
| 7.4.4.2.5 | 100 pair | Mtr. | 20.00 | 425.52 | 275.16 |
| 17.4.5 | Wiring for sub mains ISI marked (IS:694) 1100 Volts grade PVC insulated flat twin core sheathed solid aluminium conductor with 10 SWG G.I. Support wire duly clipped etc. as required. | | | | |
| 17.4.5.1 | 4.0 sq.mm | Mtr. | 4.00 | 26.40 | 24.80 |
| 17.4.5.2 | 6.0 sq.mm | Mtr. | 5.00 | 34.08 | 32.00 |
| 17.4.5.4 | 10.0 sq.mm | Mtr. | 5.00 | 44.48 | 41.12 |
| 17.4.6 | Supplying and fixing of power plug point accessories on 18 SWG metal box of size 175 x 100 x 60 mm. on surface or in recessed with suitable size phenolic laminated sheet cover including cost of 6 pin 16 amp. Switch and socket outlet , making connection , testing , etc. as required. | EACH | 25.00 | 140.00 | 110.00 |

| Code No. | Description | Unit | Rates in Rs. | | |
|----------|---|------|--------------|---------|---------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.4.7 | P/Laying ISI marked P.V.C. insulated submersible cable confirming to IS:694 with flexible copper conductor including making connection etc. as required | | | | |
| 17.4.7.1 | 1.5 Sq.mm 3 core flat | Mtr. | 4.00 | 32.40 | 29.64 |
| 17.4.7.2 | 2.5 Sq.mm 3 core flat | Mtr. | 4.00 | 46.20 | 42.00 |
| 17.4.7.3 | 4.0 Sq.mm 3 core flat | Mtr. | 6.00 | 67.92 | 55.44 |
| 17.4.7.4 | 6.0 Sq.mm 3 core flat | Mtr. | 6.00 | 95.52 | 81.72 |
| 17.4.7.5 | 10.0 Sq.mm 3 core flat | Mtr. | 6.00 | 142.44 | 121.68 |
| 17.4.8 | P & F Krone type main distribution frame (MDF) in the recess / surface made out of 16 SWG sheet steel box, front openable, having locking arrangements duly painted with 2 coat of red oxide paint & two coats of enamel paint. | | | | |
| 17.4.8.1 | 10 Pairs | EACH | 20.00 | 800.00 | |
| 17.4.8.2 | 20 Pairs | EACH | 25.00 | 1200.00 | |
| 17.4.8.3 | 50 Pairs | EACH | 30.00 | 2200.00 | |
| 17.4.8.4 | 100 Pairs | EACH | 40.00 | 4000.00 | |

NOTE The rate of wiring shall be increased as per following in case of higher insulation class of wires are used
 FRLS – 10%
 HFFR / ZHFR (Non PVC) – 40%

17.5 SHEET STEEL/WOODEN BOXES

| Code No | Description | Unit | Rate in Rs. | |
|-----------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.5.1 | P & F 18 SWG Sheet steel boxes duly finished with two coats of red oxide and with earthing terminal of following sizes (nominal size) on surface or in recessed as required. | | | |
| 17.5.1.1 | 75mm x 75mm x 50mm | Each | 10.00 | 22.00 |
| 17.5.1.2 | 100mm x 100mm x 50mm | Each | 10.00 | 27.00 |
| 17.5.1.3 | 150mm x 75mm x 60mm | Each | 15.00 | 38.00 |
| 17.5.1.4 | 175mm x 100mm x 60mm | Each | 15.00 | 44.00 |
| 17.5.1.5 | 150mm x 150mm x 60mm | Each | 17.00 | 49.00 |
| 17.5.1.6 | 225mm x 100mm x 60mm | Each | 17.00 | 49.00 |
| 17.5.1.7 | 200mm x 150mm x 60mm | Each | 18.00 | 55.00 |
| 17.5.1.8 | 200mm x 250mm x 75mm | Each | 22.00 | 77.00 |
| 17.5.1.9 | 200mm x 250mm x 100mm | Each | 22.00 | 83.00 |
| 17.5.1.10 | 250mm x 300mm x 75mm | Each | 25.00 | 94.00 |
| 17.5.1.11 | 250mm x 300mm x 100mm | Each | 25.00 | 100.00 |
| 17.5.1.12 | 300mm x 375mm x 75mm | Each | 27.00 | 111.00 |
| 17.5.1.13 | 300mm x 375mm x 100mm | Each | 27.00 | 117.00 |
| 17.5.2 | P & F in position frame made out of M.S. angle (riveted or welded) finished with two coats of red oxide and enamel paint of following sizes as required. | | | |
| 17.5.2.1 | 25mm x 25mm x 3mm | Mtr. | 12.00 | 50.00 |
| 17.5.2.2 | 25mm x 25mm x 4.5mm | Mtr. | 12.00 | 61.00 |
| 17.5.2.3 | 38mm x 38mm x 4.5mm | Mtr. | 15.00 | 72.00 |
| 17.5.2.4 | 38mm x 38mm x 6mm | Mtr. | 15.00 | 90.00 |
| 17.5.2.5 | 50mm x 50mm x 6mm | Mtr. | 20.00 | 118.00 |
| 17.5.3 | P & Fixing M.S. sheet on existing angle iron frame by means of nuts and bolts and making required no. of holes for fixing accessories including two coat of red oxide paint and two coats of enamel paint etc. as required. | | | |
| 17.5.3.1 | 1.6 mm thick | Sqm. | 75.00 | 506.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.5.3.2 | 2.0 mm thick | Sqm. | 80.00 | 563.00 |
| 17.5.3.3 | 3.0 mm thick | Sqm. | 85.00 | 677.00 |
| 17.5.4 | P & Fixing M.S. flat on existing angle iron frame and making required no. of holes for fixing accessories including one coat of red oxide paint and two coats of enamel paint etc. as required. | | | |
| 17.5.4.1 | 25 mm x 3 mm | Mtr. | 8.00 | 22.00 |
| 17.5.4.2 | 25 mm x 5 mm | Mtr. | 10.00 | 33.00 |
| 17.5.4.3 | 38 mm x 5 mm | Mtr. | 12.00 | 44.00 |
| 17.5.4.4 | 50 mm x 6 mm | Mtr. | 15.00 | 61.00 |
| 17.5.5 | P & F sheet for boxes/ frames including making holes for switches etc, with brass screws, washers/ zinc plated nut and bolts as required. | | | |
| 17.5.5.1 | Synthetic phenolic resin bonded laminates confirming to IS:2046 of Group2 | | | |
| 17.5.5.1.1 | 3.0 mm thick | Sq.m | 90.00 | 562.00 |
| 17.5.5.2 | Bakelite sheet | | | |
| 17.5.5.2.1 | 4.8 mm thick | Sq.m | 90.00 | 676.00 |
| 17.5.5.2.2 | 6.4 mm thick | Sq.m | 95.00 | 917.00 |
| 17.5.5.2.3 | 9.0 mm thick | Sq.m | 100.00 | 1422.00 |
| 17.5.5.2.4 | 12.0 mm thick | Sq.m | 120.00 | 1880.00 |
| 17.5.5.2.5 | 19.0 mm thick | Sq.m | 140.00 | 3142.00 |
| 17.5.5.2.6 | 25.0 mm thick | Sq.m | 150.00 | 4578.00 |
| 17.5.6 | P & F phenolic laminated sheet 2.0 mm thick of size 75 mm dia. Including screws, cup washer as required. | Each | 1.00 | 4.00 |
| 17.5.7 | P & F P.V.C. sheet of size 75 mm dia. Including screws, cup washer as required. | Each | 1.00 | 2.00 |
| 17.5.8 | P & F Aluminium sheet 1.0 m thick of size 75 mm dia. Including screws, cup washer as required. | Each | 1.00 | 2.00 |
| 17.5.9 | P & F surface/recessed type 10 mm thick Teak wood board duly antitermite treated, varnished and fixed by using gutties/ PVC fasteners of following size as required. | | | |
| 17.5.9.1 | 150 mm x 75 mm | Each | 5.00 | 13.00 |
| 17.5.9.2 | 100 mm x 100 mm | Each | 5.00 | 13.00 |

| Code No | Description | Unit | Rate in Rs. | |
|---------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.5.9.3 | 100 mm x 175 mm | Each | 5.00 | 16.00 |
| 17.5.9.4 | 200 mm x 250 mm | Each | 7.00 | 28.00 |
| 17.5.9.5 | 250 mm x 300 mm | Each | 7.00 | 33.00 |
| 17.5.9.6 | 300 mm x 375 mm | Each | 7.00 | 51.00 |
| 17.5.9.7 | 375 mm x 450 mm | Each | 10.00 | 56.00 |
| 17.5.9.8 | 450 mm x 600 mm | Each | 10.00 | 79.00 |
| 17.5.10 | P & F of 3.00mm PVC sheet for fan box with help of screws, cup washer as required | Each | 1.00 | 9.00 |
| 17.5.11 | P &F screw less Cage Clamp type Terminal Blocks with Nylon T.B., End Plate, Adjacent insulated Jumpers, End Stop, Yellow Chromated Din Rail etc. complete in all respect for following sizes. | | | |
| 17.5.11.1 | 2.5 sq. mm. | | | |
| 17.5.11.1.1 | One In One Out | | | |
| 17.5.11.1.1.1 | 3 way | Each | 6.00 | 72.00 |
| 17.5.11.1.1.2 | 4 way | Each | 7.00 | 88.00 |
| 17.5.11.1.1.3 | 6 way | Each | 9.00 | 114.00 |
| 17.5.11.1.1.4 | 8 way | Each | 11.00 | 140.00 |
| 17.5.11.1.2 | One In Two Out | | | |
| 17.5.11.1.2.1 | 3 way | Each | 8.00 | 99.00 |
| 17.5.11.1.2.2 | 4 way | Each | 10.00 | 122.00 |
| 17.5.11.1.2.3 | 6 way | Each | 13.00 | 161.00 |
| 17.5.11.1.2.4 | 8 way | Each | 16.00 | 201.00 |
| 17.5.11.1.3 | One In Three Out | | | |
| 17.5.11.1.3.1 | 3 way | Each | 9.00 | 117.00 |
| 17.5.11.1.3.2 | 4 way | Each | 11.00 | 144.00 |
| 17.5.11.1.3.3 | 6 way | Each | 15.00 | 191.00 |
| 17.5.11.1.3.4 | 8 way | Each | 19.00 | 239.00 |
| 17.5.11.2 | 4 sq. mm. | | | |
| 17.5.11.2.1 | One In One Out | | | |
| 17.5.11.2.1.1 | 3 way | Each | 8.00 | 102.00 |
| 17.5.11.2.1.2 | 4 way | Each | 10.00 | 123.00 |
| 17.5.11.2.1.3 | 6 way | Each | 13.00 | 158.00 |

| Code No | Description | Unit | Rate in Rs. | |
|---------------|------------------|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.5.11.2.1.4 | 8 way | Each | 15.00 | 193.00 |
| 17.5.11.2.2 | One In Two Out | | | |
| 17.5.11.2.2.1 | 3 way | Each | 11.00 | 141.00 |
| 17.5.11.2.2.2 | 4 way | Each | 14.00 | 173.00 |
| 17.5.11.2.2.3 | 6 way | Each | 18.00 | 228.00 |
| 17.5.11.2.2.4 | 8 way | Each | 23.00 | 284.00 |
| 17.5.11.2.3 | One In Three Out | | | |
| 17.5.11.2.3.1 | 3 way | Each | 13.00 | 166.00 |
| 17.5.11.2.3.2 | 4 way | Each | 16.00 | 202.00 |
| 17.5.11.2.3.3 | 6 way | Each | 22.00 | 270.00 |
| 17.5.11.2.3.4 | 8 way | Each | 27.00 | 338.00 |
| 17.5.11.3 | 6 sq. mm. | | | |
| 17.5.11.3.1 | One In One Out | | | |
| 17.5.11.3.1.1 | 3 way | Each | 13.00 | 166.00 |
| 17.5.11.3.1.2 | 4 way | Each | 16.00 | 205.00 |
| 17.5.11.3.1.3 | 6 way | Each | 22.00 | 275.00 |
| 17.5.11.3.1.4 | 8 way | Each | 28.00 | 345.00 |
| 17.5.11.3.2 | One In Two Out | | | |
| 17.5.11.3.2.1 | 3 way | Each | 20.00 | 244.00 |
| 17.5.11.3.2.2 | 4 way | Each | 25.00 | 307.00 |
| 17.5.11.3.2.3 | 6 way | Each | 34.00 | 426.00 |
| 17.5.11.3.2.4 | 8 way | Each | 44.00 | 545.00 |
| 17.5.11.4 | 10 sq. mm. | | | |
| 17.5.11.4.1 | One In One Out | | | |
| 17.5.11.4.1.1 | 3 way | Each | 20.00 | 247.00 |
| 17.5.11.4.1.2 | 4 way | Each | 25.00 | 308.00 |
| 17.5.11.4.1.3 | 6 way | Each | 34.00 | 426.00 |
| 17.5.11.4.1.4 | 8 way | Each | 44.00 | 544.00 |
| 17.5.11.4.2 | One In Two Out | | | |
| 17.5.11.4.2.1 | 3 way | Each | 31.00 | 390.00 |
| 17.5.11.4.2.2 | 4 way | Each | 40.00 | 498.00 |

| Code No | Description | Unit | Rate in Rs. | |
|----------------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.5.11.4.2.3 | 6 way | Each | 57.00 | 707.00 |
| 17.5.11.4.2.4 | 8 way | Each | 73.00 | 916.00 |
| 17.5.11.5 | 16 sq. mm. | | | |
| 17.5.11.5.1 | One In One Out | | | |
| 17.5.11.5.1.1 | 3 way | Each | 28.00 | 347.00 |
| 17.5.11.5.1.2 | 4 way | Each | 35.00 | 438.00 |
| 17.5.11.5.1.3 | 6 way | Each | 49.00 | 612.00 |
| 17.5.11.5.1.4 | 8 way | Each | 63.00 | 788.00 |
| 17.5.11.5.2 | One In Two Out | | | |
| 17.5.11.5.2 .1 | 3 way | Each | 37.00 | 462.00 |
| 17.5.11.5.2 .2 | 4 way | Each | 47.00 | 590.00 |
| 17.5.11.5.2 .3 | 6 way | Each | 67.00 | 839.00 |
| 17.5.11.5.2 .4 | 8 way | Each | 87.00 | 1086.00 |
| 17.5.11.6 | 35 sq. mm. | | | |
| 17.5.11.6.1 | One In One Out | | | |
| 17.5.11.6.1.1 | 3 way | Each | 77.00 | 958.00 |
| 17.5.11.6.1.2 | 4 way | Each | 100.00 | 1251.00 |
| 17.5.11.7 | 95 sq. mm. | | | |
| 17.5.11.7.1 | One In One Out | | | |
| 17.5.11.7.1.1 | 3 way | Each | 403.00 | 5038.00 |
| 17.5.11.7.1.2 | 4 way | Each | 537.00 | 6707.00 |
| 17.5.12 | P & F 3 Way Connector equivalent to Ceiling Rose Connector for Falls Ceiling (WAGO make) | Each | 2.00 | 23.00 |
| 17.5.13 | P & F 3 Wire Shorting Connectors for Neutral or Phase (WAGO make) | Each | 3.00 | 21.00 |
| 17.5.14 | P & F 5 Wire Shorting Connectors for Neutral or Phase (WAGO make) | Each | 5.00 | 36.00 |
| 17.5.15 | P & F Service Connector for One to One Wire Connection in place of Tape (WAGO make) | Each | 5.00 | 30.00 |
| 17.5.16 | P & F Lighting Connector for One Solid & One Flexible wire connection (WAGO make) | Each | 3.00 | 13.00 |
| 17.5.17 | P & F Lighting Connector for Two Solid & One Flexible wire connection (WAGO make) | Each | 3.00 | 14.00 |
| 17.5.18 | P & F 3 Way Male Female Connector (WAGO make) | Each | 10.00 | 104.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-----------|---|---------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.5.19 | P & F 2Way, 4 Conductors high current 32 Amp. Connector (WAGO make) | Each | 7.00 | 52.00 |
| 17.5.20 | P & F 3 Way, 4 Conductors high current 32 Amp. Connector (WAGO make) | Each | 12.00 | 78.00 |
| 17.5.21 | Labour charges for dismantling of surface PVC/ Steel conduit including wiring in conduit, conduit fittings and depositing the same with listing of material in store. | R. Mtr. | 5.00 | |
| 17.5.22 | Labour charges for dismantling of surface/ recessed switch board of any size and depositing the same with listing of material in store. | Each | 3.00 | |
| 17.5.23 | Labour charges for dismantling of switch accessories like switch, socket, ceiling rose, holder and depositing the same with listing of material in store. | Each | 1.50 | |
| 17.5.24 | Labour charges for dismantling of wiring in existing conduit of following size and depositing the same with listing of material in store. | | | |
| 17.5.24.1 | up to 2.5 sq. mm. wire | R. Mtr. | 1.00 | |
| 17.5.24.2 | 4/ 6 sq. mm. wire | R. Mtr. | 1.20 | |
| 17.5.24.3 | 10 sq. mm. wire | R. Mtr. | 2.00 | |
| NOTE | Add 30 % for GROUP1 synthetic phenolic resin bonded industrial laminates | | | |

17.6 MCCB, DB & RCCB

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|----------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.6.1 | P&F 240/415 V MCB of breaking capacity not less than 10 KA (B/ C/ D tripping characteristic) ISI marked IS 8828(1996)]/ conforming to IEC 60898 in existing board/sheets including making connections with lugs, testing etc. as required. | | | | |
| 17.6.1.1 | Single pole MCB | | | | |
| 17.6.1.1.1 | 0.5 A to 4 A rating | Each | 8.00 | 250.00 | 222.09 |
| 17.6.1.1.2 | 6 A to 32 A rating | Each | 8.00 | 175.00 | 132.12 |
| 17.6.1.1.3 | 40A to 63 A rating | Each | 8.00 | 355.00 | 263.15 |
| 17.6.1.2 | Double pole MCB | | | | |
| 17.6.1.2.1 | 6 A to 32 A rating | Each | 9.00 | 495.00 | 424.64 |
| 17.6.1.2.2 | 40 A to 63 A rating | Each | 9.00 | 800.00 | 565.46 |
| 17.6.1.3 | Single pole & neutral MCB | | | | |
| 17.6.1.3.1 | 6 A to 32 A rating | Each | 9.00 | 401.00 | 332.00 |
| 17.6.1.3.2 | 40 A 63 A rating | Each | 9.00 | 660.00 | 459.00 |
| 17.6.1.4 | Triple pole MCB | | | | |
| 17.6.1.4.1 | 6 A to 32 A rating | Each | 10.00 | 795.00 | 622.83 |
| 17.6.1.4.2 | 40 A 63 A rating | Each | 10.00 | 1235.00 | 960.29 |
| 17.6.1.5 | Triple pole & neutral MCB | | | | |
| 17.6.1.5.1 | 6 A to 32 A rating | Each | 12.00 | 918.00 | 740.00 |
| 17.6.1.5.2 | 40 A 63 A rating | Each | 12.00 | 1321.00 | 1033.00 |
| 17.6.1.6 | Four pole MCB | | | | |
| 17.6.1.6.1 | 6 A to 32 A rating | Each | 12.00 | 1060.00 | 861.39 |
| 17.6.1.6.2 | 40 A 63 A rating | Each | 12.00 | 1600.00 | 1332.95 |
| 17.6.2 | P&F 240/415 V isolator conforming to IS:13947-III/ IEC 60947-3 on existing board / sheet including making connections with lugs , testing etc. as required. | | | | |
| 17.6.2.1 | Double pole isolator | | | | |
| 17.6.2.1.1 | 30 A / 40 A rating | Each | 9.00 | 310.00 | 214.30 |
| 17.6.2.1.2 | 63 A rating | Each | 9.00 | 410.00 | 319.51 |
| 17.6.2.2 | Triple pole Isolator | | | | |
| 17.6.2.2.1 | 30 A / 40 A rating | Each | 10.00 | 540.00 | 445.68 |
| 17.6.2.2.2 | 63 A rating | Each | 10.00 | 620.00 | 501.69 |
| 17.6.2.2.3 | 100 A rating | Each | 10.00 | 750.00 | 652.27 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|-------------|---------|----------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.6.2.3 | Four pole Isolator | | | | |
| 17.6.2.3.1 | 30 A / 40 A rating | Each | 12.00 | 680.00 | 587.50 |
| 17.6.2.3.2 | 63 A rating | Each | 12.00 | 750.00 | 599.05 |
| 17.6.2.3.3 | 100 A rating | Each | 12.00 | 810.00 | 747.02 |
| 17.6.3 | P&F of RCBO with overload, short-circuit and earth leakage protection ISI marked (IS12640)/ conforming to IEC 61009/1 complete in all respect including making connections with lugs, testing etc. as required. | | | | |
| 17.6.3.1 | Two pole 30 mA sensitivity | | | | |
| 17.6.3.1.1 | 16 A rating | Each | 9.00 | 2410.00 | 1955.28 |
| 17.6.3.1.2 | 25 A rating | Each | 9.00 | 2410.00 | 1971.47 |
| 17.6.3.1.3 | 40 A rating | Each | 9.00 | 2410.00 | 1888.55 |
| 17.6.3.2 | Two pole 100/300mA sensitivity | | | | |
| 17.6.3.2.1 | 16 A rating | Each | 9.00 | 2025.00 | 1586.85 |
| 17.6.3.2.2 | 25 A rating | Each | 9.00 | 2025.00 | 1651.34 |
| 17.6.3.2.3 | 40 A rating | Each | 9.00 | 2140.00 | 1722.17 |
| 17.6.3.3 | Four pole 30 mA sensitivity | | | | |
| 17.6.3.3.1 | 25 A rating | Each | 12.00 | 2040.00 | 1670.02 |
| 17.6.3.3.2 | 40 A rating | Each | 12.00 | 2140.00 | 1814.51 |
| 17.6.3.3.3 | 63 A rating | Each | 12.00 | 2140.00 | 1862.76 |
| 17.6.3.4 | Four pole 100/300 mA sensitivity | | | | |
| 17.6.3.4.1 | 25 A rating | Each | 12.00 | 2040.00 | 1685.71 |
| 17.6.3.4.2 | 40 A rating | Each | 12.00 | 2140.00 | 1783.07 |
| 17.6.3.4.3 | 63 A rating | Each | 12.00 | 2140.00 | 1789.31 |
| 17.6.4 | P&F 240/415 V Residual current circuit breaker conforming to IS:12640:1988/ IEC 61008 on existing board/sheet including making connections with lugs, testing etc. as required | | | | |
| 17.6.4.1 | Two pole 30 mA sensitivity | | | | |
| 17.6.4.1.1 | 25 A rating | Each | 9.00 | 1840.00 | 1388.52 |
| 17.6.4.1.2 | 40 A rating | Each | 9.00 | 2160.00 | 1632.63 |
| 17.6.4.1.3 | 63A rating | Each | 9.00 | 2485.00 | 2360.70 |
| 17.6.4.2 | Two pole 100/300mA sensitivity | | | | |
| 17.6.4.2.1 | 25 A rating | Each | 9.00 | 1925.00 | 1580.44 |
| 17.6.4.2.2 | 40 A rating | Each | 9.00 | 2250.00 | 1726.98 |
| 17.6.4.2.3 | 63 A rating | Each | 9.00 | 2585.00 | 2154.01 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|-------------|----------------|----------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.6.4.3 | Four pole 30 mA sensitivity | | | | |
| 17.6.4.3.1 | 25 A rating | Each | 12.00 | 2410.00 | 2007.94 |
| 17.6.4.3.2 | 40 A rating | Each | 12.00 | 2475.00 | 2108.07 |
| 17.6.4.3.3 | 63 A rating | Each | 12.00 | 2860.00 | 2526.66 |
| 17.6.4.4 | Four pole 100/300 mA sensitivity | | | | |
| 17.6.4.4.1 | 25 A rating | Each | 12.00 | 2500.00 | 1928.15 |
| 17.6.4.4.2 | 40 A rating | Each | 12.00 | 2565.00 | 2027.79 |
| 17.6.4.4.3 | 63 A rating | Each | 12.00 | 2980.00 | 2483.54 |
| 17.6.5 | P&F Recessed/ Surface mounting heavy duty horizontal type sheet steel Distribution board phosphatised/ powder painted complete with copper bus bar, shorting link , neutral link, earth link and din bar, conforming to IS13032 & IS8623 including making internal DB terminations with copper lugs , testing etc. as required. | | | | |
| 17.6.5.1 | Single door (single phase) | | | | |
| 17.6.5.1.1 | 4 Way | Each | 50.00 | 585.00 | 514.04 |
| 17.6.5.1.2 | 6 Way | Each | 50.00 | 585.00 | 500.58 |
| 17.6.5.1.3 | 8 Way | Each | 50.00 | 660.00 | 540.94 |
| 17.6.5.1.4 | 12 Way | Each | 70.00 | 790.00 | 710.16 |
| 17.6.5.1.5 | 16 Way | Each | 70.00 | 985.00 | 900.99 |
| 17.6.5.2 | Single door (Three phase) | | | | |
| 17.6.5.2.1 | 4 Way | Each | 100.00 | 1350.00 | 1006.33 |
| 17.6.5.2.2 | 6 Way | Each | 100.00 | 1770.00 | 1451.26 |
| 17.6.5.2.3 | 8 Way | Each | 150.00 | 2125.00 | 1629.73 |
| 17.6.5.2.4 | 12 Way | Each | 150.00 | 3195.00 | 2073.95 |
| 17.6.5.3 | Double door (single phase) | | | | |
| 17.6.5.3.1 | 4 Way | Each | 50.00 | 905.00 | 676.76 |
| 17.6.5.3.2 | 6 Way | Each | 50.00 | 980.00 | 741.28 |
| 17.6.5.3.3 | 8 Way | Each | 50.00 | 1065.00 | 816.72 |
| 17.6.5.3.4 | 12 Way | Each | 70.00 | 1290.00 | 1197.95 |
| 17.6.5.3.5 | 16 Way | Each | 70.00 | 1595.00 | 1432.70 |
| 17.6.5.4 | Double door (Three phase) | | | | |
| 17.6.5.4.1 | 4 Way | Each | 100.00 | 1965.00 | 1555.82 |
| 17.6.5.4.2 | 6 Way | Each | 100.00 | 2675.00 | 2152.85 |
| 17.6.5.4.3 | 8 Way | Each | 150.00 | 3155.00 | 2351.55 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|----------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.6.5.4.4 | 12 Way | Each | 150.00 | 4820.00 | 3519.29 |
| 17.6.5.5 | Single door (Three phase) Per phase isolation | | | | |
| 17.6.5.5.1 | 2+8 Way | Each | 170.00 | 4580.00 | 4136.52 |
| 17.6.5.5.2 | 2+12 Way | Each | 170.00 | 5475.00 | 5050.22 |
| 17.6.5.6 | Double door (Three phase) Per phase isolation | | | | |
| 17.6.5.6.1 | 2+8 Way | Each | 170.00 | 8390.00 | 7696.05 |
| 17.6.5.6.2 | 2+12 Way | Each | 170.00 | 9725.00 | 9073.94 |
| 17.6.6 | P&F flush/surface type enclosure for housing MCB/Isolator with Din rail including making connections with lugs, repairs etc. as required. | | | | |
| 17.6.6.1 | With sheet steel enclosure | | | | |
| 17.6.6.1.1 | One way | Each | 25.00 | 295.00 | 194.73 |
| 17.6.6.1.2 | Two way | Each | 25.00 | 295.00 | 177.45 |
| 17.6.6.1.3 | Three way | Each | 30.00 | 310.00 | 191.47 |
| 17.6.6.1.4 | Four way | Each | 30.00 | 310.00 | 197.17 |
| 17.6.6.2 | With plastic enclosure | | | | |
| 17.6.6.2.1 | One way | Each | 25.00 | 111.00 | 82.00 |
| 17.6.6.2.2 | Two way | Each | 25.00 | 117.00 | 88.00 |
| 17.6.6.2.3 | Three way | Each | 30.00 | 134.00 | 99.00 |
| 17.6.6.2.4 | Four way | Each | 30.00 | 139.00 | 105.00 |
| 17.6.7 | P&F metal clad industrial plug top & socket unit with pin and sleeve type contact on porcelain/ bakelite base in sheet steel enclosure (without MCB) including making connections with lugs, testing etc.as required | | | | |
| 17.6.7.1 | Single phase (Three pin) | | | | |
| 17.6.7.1.1 | 10 A | Each | 25.00 | 660.00 | 568.71 |
| 17.6.7.1.2 | 20 A | Each | 25.00 | 725.00 | 603.46 |
| 17.6.7.2 | Three phase (Five pin) | | | | |
| 17.6.7.2.1 | 20 A | Each | 30.00 | 2310.00 | 1914.51 |
| 17.6.7.2.2 | 30A-32A | Each | 30.00 | 2310.00 | 1923.88 |
| 17.6.8 | P&F metal clad industrial plug top & socket with butt type contacts, interlocking feature and auto closing safety shutter (without MCB), making connections with lugs, testing etc. as required | | | | |
| 17.6.8.1 | Three pin/Four pin 20 A | Each | 25.00 | 1975.00 | 1415.42 |

| Code No | Description | Unit | Rate in Rs. | | |
|-------------|--|------|-------------|----------------|----------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.6.9 | P & F of Industrial plug and socket conforming to IEC 60309-1/2 made out of self extinguishing engineering polymer / polyamide, nickel plated brass sleeve and pins, socket with shutter including making connection etc as required | | | | |
| 17.6.9.1 | Panel mounted socket | | | | |
| 17.6.9.1.1 | 16 A 3 pin | Each | 20.00 | 250.00 | 225.00 |
| 17.6.9.1.2 | 32 A 4 pin | Each | 20.00 | 525.00 | 470.00 |
| 17.6.9.1.3 | 63 A 5 pin | Each | 25.00 | 2145.00 | 1600.00 |
| 17.6.9.2 | Surface mounted socket | | | | |
| 17.6.9.2.1 | 16 A 3 pin | Each | 20.00 | 560.00 | 500.00 |
| 17.6.9.2.2 | 32 A 4 pin | Each | 20.00 | 630.00 | 600.00 |
| 17.6.9.2.3 | 63 A 5 pin | Each | 25.00 | 2239.00 | 1700.00 |
| 17.6.9.3 | Mobile socket | | | | |
| 17.6.9.3.1 | 16 A 3 pin | Each | 10.00 | 361.00 | 300.00 |
| 17.6.9.3.2 | 32 A 4 pin | Each | 10.00 | 516.00 | 450.00 |
| 17.6.9.3.3 | 63 A 5 pin | Each | 10.00 | 2517.00 | 1800.00 |
| 17.6.9.4 | Plug top | | | | |
| 17.6.9.4.1 | 16 A 3 pin | Each | 10.00 | 286.00 | 250.00 |
| 17.6.9.4.2 | 32 A 4 pin | Each | 10.00 | 378.00 | 300.00 |
| 17.6.9.4.3 | 63 A 5 pin | Each | 10.00 | 1724.00 | 1300.00 |
| 17.6.10 | P&F recessed/ surface mounting heavy duty Vertical type sheet steel Distribution board with provision of 8 way incomer, phophatised ,powder painted complete with insulated copper bus bar , neutral link, earth link and din bar, conforming to IS13032 & IS8623 including making internal DB terminations with copper lugs , testing etc. as required. | | | | |
| 17.6.10.1 | Single door (Three phase) | | | | |
| 17.6.10.1.1 | 4 Way | Each | 100.00 | 3090.00 | 2055.00 |
| 17.6.10.1.2 | 6 Way | Each | 100.00 | 3550.00 | 2745.00 |
| 17.6.10.1.3 | 8 Way | Each | 150.00 | 3772.00 | 2968.00 |
| 17.6.10.1.4 | 12 Way | Each | 150.00 | 5842.00 | 3428.00 |
| 17.6.10.2 | Double door (Three phase) | | | | |
| 17.6.10.2.1 | 4 Way | Each | 100.00 | 4125.00 | 2975.00 |
| 17.6.10.2.2 | 6 Way | Each | 100.00 | 4815.00 | 3895.00 |
| 17.6.10.2.3 | 8 Way | Each | 150.00 | 5038.00 | 4118.00 |
| 17.6.10.2.4 | 12 Way | Each | 150.00 | 7338.00 | 4922.00 |

Note: Tripping Characteristics curve shall be mentioned in G Schedule / Estimate to arrive actual tender rate.

17.7 ELECTRICAL ACCESSORIES

| Code No | Description | Unit | Rate in Rs. | | |
|---------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.7.1 | P & F ISI marked (IS :3854) 6 amp. porcelain base single pole tumbler switch including making connection testing etc. as required. | Each | 5.00 | 26.00 | 20.00 |
| 17.7.2 | P & F ISI marked (IS :3854) 16 amp. porcelain base single pole tumbler switch including making connection testing etc. as required. | Each | 5.00 | 53.00 | 48.00 |
| 17.7.3 | P & F ISI marked (IS :3854) 6 amp. flush type switch including cutting hole in tile and making connection testing etc. as required. | Each | 5.00 | 17.00 | 14.00 |
| 17.7.4 | P & F ISI marked (IS :3854) 16 amp. flush type switch including cutting hole in tile and making connection testing etc. as required. | Each | 5.00 | 43.00 | 36.00 |
| 17.7.5 | P & F ISI marked (IS :3854) bell push surface type including making connection testing etc. as required. | Each | 5.00 | 18.00 | 16.00 |
| 17.7.6 | P & F ISI marked (IS :3854) twin control switch surface type including making connection testing etc. as required. | Each | 5.00 | 30.00 | 24.00 |
| 17.7.7 | P & F ISI marked (IS :3854) bell push flush type including cutting hole in tile and making connection testing etc. as required. | Each | 5.00 | 18.00 | 16.00 |
| 17.7.8 | P & F ISI marked (IS :3854) 6A twin control switch flush type including cutting hole in tile and making connection testing etc. as required. | Each | 5.00 | 19.00 | 16.00 |
| 17.7.9 | P & F ISI marked hanging bell push/one way switch including making connection testing etc. as required. | Each | 5.00 | 20.00 | 17.00 |
| 17.7.10 | P & F ISI marked (IS :1293) 3 pin 6 amp. porcelain base tumbler socket including making connection testing etc. as required. | Each | 5.00 | 24.00 | 19.00 |
| 17.7.11 | P & F ISI marked (IS :1293) 6 pin 16 amp. porcelain base tumbler socket including making connection testing etc. as required. | Each | 5.00 | 50.00 | 46.00 |
| 17.7.12 | P & F ISI marked (IS :1293) 3 pin 6 amp. flush type socket including cutting hole in tile and making connection testing etc. as required. | Each | 5.00 | 18.00 | 16.00 |
| 17.7.13 | P & F ISI marked (IS :1293) 3/6 pin 16 amp flush type socket including cutting hole in tile and making connection testing etc. as required. | Each | 5.00 | 46.00 | 39.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|---------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.7.14 | P & F ISI:371 marked 6 amp surface type ceiling rose including making connection testing etc. as required. | Each | 5.00 | 16.00 | 14.00 |
| 17.7.15 | P & F ISI marked 6 amp bakelite batten/angle holder including making connection testing etc. as required. | Each | 5.00 | 18.00 | 16.00 |
| 17.7.16 | P & F ISI marked 6 amp bakelite unbreakable 3 pin plug top including making connection testing etc. as required. | Each | 5.00 | 26.00 | 23.00 |
| 17.7.17 | P & F ISI marked 16 amp bakelite unbreakable 3 pin plug top including making connection testing etc. as required. | Each | 5.00 | 37.00 | 32.00 |
| 17.7.18 | P & F ISI marked flush type 2 pin telephone socket with plug top including making connection testing etc. as required. | Each | 5.00 | 35.00 | 32.00 |
| 17.7.19 | P & F ISI marked flush type single line telephone jack including making connection testing etc. as required. | Each | 5.00 | 47.00 | 36.00 |
| 17.7.20 | P & F ISI marked flush type double line telephone jack including making connection testing etc. as required. | Each | 5.00 | 54.00 | 40.00 |
| 17.7.21 | P & F ISI marked flush type coaxial T.V. socket including making connection testing etc. as required. | Each | 5.00 | 20.00 | 16.00 |
| 17.7.22 | P & F ISI marked flush type 120/280 watt rotary step fan regulator including making connection testing etc. as required. | Each | 5.00 | 189.00 | 172.00 |
| 17.7.23 | P & F ISI marked 32 A D.P. switch with fuse and indicating lamp including making connection testing etc. as required. | Each | 25.00 | 86.00 | 74.00 |
| 17.7.24 | P & F ISI marked gong bell including making connection testing etc. as required. | Each | 25.00 | 51.00 | 45.00 |
| 17.7.25 | P & F ISI marked flush/surface type buzzer including making connection testing etc. as required. | Each | 25.00 | 43.00 | 36.00 |
| 17.7.26 | P & F ISI marked single tone electronic call bell including making connection testing etc. as required. | Each | 25.00 | 212.00 | 189.00 |
| 17.7.27 | P & F ISI marked ding dong/musical chime bell including making connection testing etc. as required. | Each | 25.00 | 74.00 | 62.00 |
| 17.7.28 | P & F office one module call bell system comprising of indicator, push to reset switch housed in pvc/metallic sheet including making connection testing etc. as required. | Each | 25.00 | 86.00 | 74.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.7.29 | P & F ISI marked 400 watt switch type dimmer including making connection testing etc. as required. | Each | 5.00 | 138.00 | 120.00 |
| 17.7.30 | P & F ISI marked 400 watt metallic flush/surface type dimmer including making connection testing etc. as required. | Each | 5.00 | 166.00 | 143.00 |
| 17.7.31 | P & F following modular accessories made out of unbreakable and fire retardant poly carbonate with silver contacts including making connections testing etc. as required | | | | |
| 17.7.31.1 | 6 A one way switch | Each | 2.00 | 92.00 | 74.00 |
| 17.7.31.2 | 6 A two way switch | Each | 2.00 | 109.00 | 86.00 |
| 17.7.31.3 | 6 A bell push | Each | 2.00 | 120.00 | 86.00 |
| 17.7.31.4 | 16 A one way switch | Each | 2.00 | 138.00 | 103.00 |
| 17.7.31.5 | 6 A 3 pin shuttered socket | Each | 2.00 | 120.00 | 103.00 |
| 17.7.31.6 | 16 A 6 pin shuttered socket | Each | 2.00 | 189.00 | 172.00 |
| 17.7.31.7 | 13 A flat pin English socket | Each | 2.00 | 201.00 | 178.00 |
| 17.7.31.8 | 2 pin Telephone socket | Each | 2.00 | 138.00 | 97.00 |
| 17.7.31.9 | RJ-11 telephone jack single two line | Each | 2.00 | 86.00 | 80.00 |
| 17.7.31.10 | RJ-11 telephone jack double two line | Each | 2.00 | 143.00 | 120.00 |
| 17.7.31.11 | RJ-45 computer jack with shutter | Each | 2.00 | 149.00 | 138.00 |
| 17.7.31.12 | T.V. coaxial socket | Each | 2.00 | 103.00 | 74.00 |
| 17.7.31.13 | 5 step fan regulator | Each | 2.00 | 460.00 | 402.00 |
| 17.7.31.14 | Dimmer 300-500 watt switch type | Each | 2.00 | 402.00 | 258.00 |
| 17.7.31.15 | Blanking plate | Each | 1.00 | 19.00 | 17.00 |
| 17.7.32 | P & F following size mounting grid plates with cover plates | | | | |
| 17.7.32.1 | 1/2 Module | Each | 2.00 | 69.00 | 57.00 |
| 17.7.32.2 | 3 Module | Each | 2.00 | 74.00 | 57.00 |
| 17.7.32.3 | 4 Module | Each | 2.00 | 80.00 | 69.00 |
| 17.7.32.4 | 5/6 Module | Each | 3.00 | 109.00 | 92.00 |
| 17.7.32.5 | 8 Module | Each | 3.00 | 161.00 | 115.00 |
| 17.7.32.6 | 10/ 12 Module | Each | 5.00 | 200.00 | 143.00 |
| 17.7.32.7 | 16/ 18 Module | Each | 5.00 | 258.00 | 172.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.7.33 | P & F following size hot dip galvanized M.S. box with earthing terminal in recess/ surface suitable for modular accessories as required. | | | | |
| 17.7.33.1 | 1-2 Module | Each | 7.00 | 40.00 | 27.00 |
| 17.7.33.2 | 3 Module | Each | 7.00 | 47.00 | 30.00 |
| 17.7.33.3 | 4 Module | Each | 7.00 | 54.00 | 39.00 |
| 17.7.33.4 | 5-6 Module | Each | 7.00 | 82.00 | 68.00 |
| 17.7.33.5 | 8 Module | Each | 10.00 | 95.00 | 79.00 |
| 17.7.33.6 | 10/ 12 Module | Each | 15.00 | 130.00 | 107.00 |
| 17.7.33.7 | 16/ 18 Module | Each | 20.00 | 158.00 | 135.00 |
| 17.7.34 | P & F ISI marked following semi modular accessories with decorative cover plate of approved colours including making connections testing est.' as required | | | | |
| 17.7.34.1 | 6 A one way switch | Each | 2.00 | 24.00 | 21.00 |
| 17.7.34.2 | 6 A two way switch | Each | 2.00 | 27.00 | 24.00 |
| 17.7.34.3 | 6 A bell push | Each | 2.00 | 25.00 | 21.00 |
| 17.7.34.4 | 16 A one way switch | Each | 2.00 | 63.00 | 55.00 |
| 17.7.34.5 | 6 A 3 pin socket | Each | 2.00 | 28.00 | 25.00 |
| 17.7.34.6 | 16 A 6 pin socket | Each | 2.00 | 65.00 | 51.00 |
| 17.7.34.7 | 2/3 pin Telephone socket with top | Each | 2.00 | 40.00 | 34.00 |
| 17.7.34.8 | RJ-11 telephone jack single two line | Each | 2.00 | 51.00 | 42.00 |
| 17.7.34.9 | RJ-11 telephone jack double two line | Each | 3.00 | 59.00 | 53.00 |
| 17.7.34.10 | RJ-45 computer jack with shutter | Each | 5.00 | 91.00 | 75.00 |
| 17.7.34.11 | T.V. socket single outlet | Each | 2.00 | 28.00 | 24.00 |
| 17.7.34.12 | 5 step fan regulator | Each | 5.00 | 229.00 | 195.00 |
| 17.7.34.13 | 300-500 watt switch type Dimmer | Each | 5.00 | 149.00 | 125.00 |
| 17.7.35 | P & F modular Down light/Foot light with recessed metal box, fitted with lamp holder, covered with polycarbonate louvered four module plate including making connection testing etc. as required. | Each | 15.00 | 400.00 | 340.00 |
| 17.7.36 | P & F of Multiple socket with surge and spikes protection cartridge and minimum four nos. universal 6 A sockets, one 6 A switch and plug top including making connection etc as required. | Each | 5.00 | 574.00 | 517.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.7.37 | S & F of PVC trunking system for cable management including finishing accessories like corners, tee, adjustable angles, junction etc. as required . The trunking system shall have adaptable system for RJ 45 data socket/ wiring accessories/ power sockets and shall be covered with peel off plastic cover. | | | | |
| 17.7.37.1 | 80mm x 50mm | Mtr. | 10.00 | 380.00 | |
| 17.7.37.2 | 100/105mm x 50mm | Mtr. | 10.00 | 525.00 | |
| 17.7.37.3 | 150/160mm x 50mm | Mtr. | 12.00 | 1000.00 | |
| 17.7.37.4 | 195/200mm x 50mm | Mtr. | 15.00 | 1200.00 | |
| 17.7.38 | Supply, Fixing and testing of following capacity wall mounted stabilisers having output voltage variation from 200V to 250V(+/-5%) with input voltage variation from 170V to 260V, time delay facility from 2 to 4 minute and high cutoff at 270V complete in all respect | | | | |
| 17.7.38.1 | 3 kVA | Each | 40.00 | 2400.00 | 2100.00 |
| 17.7.38.2 | 4 kVA | Each | 40.00 | 2650.00 | 2250.00 |
| 17.7.38.3 | 5 kVA | Each | 40.00 | 2900.00 | 2600.00 |

17.8 LT PANEL & ACCESSORIES

| Code No | Description | Unit | Rates in Rs. | |
|----------|--|--------|--------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.8.1 | SITC of wall/free standing floor mounted dust and vermin proof compartmentalised cubical panel made out of CRCA sheet, required hardware, duly painted by either two coats of zinc/red oxide primer followed by two coats of synthetic enamel paint for powder coating in grey or required shade after rising. The panel having PU/Neoprene rubber gasket of not less than 3mm thickness, separate detachable, gland plate M.S. base channel, hinged door with locking arrangement for equipment/switchgear. Thickness of sheet shall not be less than 1.6mm up to 600mm length/width of any compartment and be of 2.0mm above 600mm. Load bearing structure shall be of 2.0mm thick sheet supported by base M.S. channel if required. Side walls and cable alley compartments having bolted type doors with detachable extension type structure (only outer area on all sides shall be measured). | | | |
| 17.8.1.1 | Powder coated / epoxy / PU painted with phosphatisation | Sq.Mtr | 400.00 | 1838.00 |
| 17.8.1.2 | Enamel painted with phosphatisation | Sq.Mtr | 300.00 | 1622.00 |
| 17.8.1.3 | Phosphatisation as per approved process | Sq.Mtr | | 288.00 |
| 17.8.2 | Supplying and fixing of Aluminium / Copper bus bar by means of SMC / DMC type insulator, high tensile nuts and bolts spring washers in existing panel including bending , cutting in required shape and size and colour coding with heat shrinkable PVC sleeves. | | | |
| 17.8.2.1 | Electrolytic grade aluminium bus bar | KG. | | 288.00 |
| 17.8.2.2 | Electrolytic grade copper bus bar | KG. | | 402.00 |
| 17.8.3 | SF of (0-500) V range Volt meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required. | | | |
| 17.8.3.1 | Analog type (96 mm x 96 mm) | Each | 30.00 | 570.00 |

| Code No | Description | Unit | Rates in Rs. | |
|------------|---|------|--------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.8.3.2 | Digital type | Each | 30.00 | 916.00 |
| 17.8.4 | SF of CT operated direct reading type Ampere meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required. | | | |
| 17.8.4.1 | Analog type (96 mm x 96 mm) | | | |
| 17.8.4.1.1 | Below 500 A | Each | 30.00 | 375.00 |
| 17.8.4.1.2 | Above 500A | Each | 30.00 | 743.00 |
| 17.8.4.2 | Digital type | | | |
| 17.8.4.2.1 | Below 500 A | Each | 30.00 | 916.00 |
| 17.8.4.2.2 | Above 500 A | Each | 30.00 | 1146.00 |
| 17.8.5 | SF of Current Transformer , with all necessary support in existing panel including connection etc. as required . | | | |
| 17.8.5.1 | up to 150 / 5 Ratio , 5 VA , class 1 accuracy | Each | 30.00 | 306.00 |
| 17.8.5.2 | from 200 / 5 to 400/5 Ratio , 10 VA , class 1 accuracy | Each | 30.00 | 323.00 |
| 17.8.5.3 | from 500 / 5 to 1600/5 Ratio , 15 VA , class 1 accuracy | Each | 35.00 | 397.00 |
| 17.8.5.4 | from 2000 / 5 to 3200 /5 Ratio , 15 VA, class 1 accuracy | Each | 35.00 | 685.00 |
| 17.8.5.5 | up to 150 / 5 Ratio , 5 VA , class 0.5 accuracy | Each | 30.00 | 340.00 |
| 17.8.5.6 | from 200 / 5 to 400/5 Ratio , 10 VA , class 0.5 accuracy | Each | 30.00 | 398.00 |
| 17.8.5.7 | from 500 / 5 to 1600/5 Ratio , 15 VA , class 0.5 accuracy | Each | 35.00 | 512.00 |
| 17.8.5.8 | from 2000 / 5 to 3200 /5 Ratio , 15 VA, class 0.5 accuracy | Each | 35.00 | 800.00 |
| 17.8.6 | SF of selector switch for voltmeter (4 position) including making connection etc. as required . | Each | 10.00 | 228.00 |
| 17.8.7 | SF of CT linked selector switch of 10 A for Ampere meter (4 position) including making connection etc. as required . | Each | 10.00 | 286.00 |

| Code No | Description | Unit | Rates in Rs. | |
|-----------|--|---------|--------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.8.8 | SF of 240/220 V, LED (22.5 mm dia) Pilot lamp with integral circuit, terminal block, including connection etc. as required. | | | |
| 17.8.8.1 | Red/yellow/Green colour | Each | 10.00 | 200.00 |
| 17.8.8.2 | Blue colour | Each | 10.00 | 430.00 |
| 17.8.9 | SF of Tap-off boxes suitable for following size of approved design. | | | |
| 17.8.9.1 | up to 95 sq. mm.(3.5/4 core) | Each | 100.00 | 215.00 |
| 17.8.9.2 | from 120 sq. mm. to 185 sq. mm.(3.5/4 core) | Each | 100.00 | 388.00 |
| 17.8.10 | P & F of energy analyser (multy function energy meter) with LCD/ LED display capable of minimum 20 numbers electrical parameters display with 1A/5A CT input for LV/ HV network, RS 485 communication port etc. complete in all respect. | Each | 50.00 | 17242.00 |
| 17.8.11 | SF of rubber matting with one side corrugated as per IS specification | | | |
| 17.8.11.1 | 1.1 KV, 12 mm thick, | SQ.Mtr. | | 862.00 |
| 17.8.11.2 | 11 KV, 25 mm thick, | SQ.Mtr. | | 1840.00 |
| 17.8.12 | SITC of self healing MPP/MP type shunt capacitor (banks) conforming to IS:13340-41 / IEC :831-1&2 in existing panel or parallel with load terminals , the capacitor shall be fitted with discharge resistors, pressure sensitive disconnecter (PSD) and shall have dissipation factor less than 0.0025 at 50 Hz and total wattage loss less than 0.5 Watt per KVAR. including making connections with suitable capacity conductors/cables testing as required. | | | |
| 17.8.12.1 | Standard duty Single phase 250 V / Three phase 440 V, 50 Hz capacitor (Bank) | kVAR | | 276.00 |
| 17.8.12.2 | Heavy duty Three phase 440 V , 50 Hz capacitor (Bank) | kVAR | | 546.00 |
| 17.8.12.3 | Gas filled Three phase 440 V, 50 Hz capacitor (Bank) | kVAR | | 360.00 |

| Code No | Description | Unit | Rates in Rs. | |
|-------------|--|------|--------------|-----------------|
| | | | Labour Rate | Complete Rate |
| 17.8.13 | SITC of microprocessor based intelligent power factor correction relay having following sensing capacity secondary current , self analysing auto c/k setting according to targeted power factor setting, the relay shall have minimum three digit display unit for display of real power factor, targeted power factor, lag/lead capacitor switching status, alarm output for under current, over current, insufficient compensation, indication of switching on units, auto/manual status, and shall have over load protection, no volt release etc. as required. | | | |
| 17.8.13.1 | 6 to 8 stage | | | |
| 17.8.13.1.1 | sensitivity up to 50 milli Amp | Each | 300.00 | 17205.00 |
| 17.8.13.1.2 | sensitivity more than 50 milli Amp | Each | 250.00 | 12612.00 |
| 17.8.13.2 | 12 to 14 stage | | | |
| 17.8.13.2.1 | sensitivity up to 50 milli Amp | Each | 350.00 | 20648.00 |
| 17.8.13.2.2 | sensitivity more than 50 milli Amp | Each | 300.00 | 16055.00 |
| 17.8.14 | P & F Cam operated rotary switches on existing panel with 2 way and off position | | | |
| 17.8.14.1 | one pole | | | |
| 17.8.14.1.1 | 16 A | Each | 20.00 | 250.00 |
| 17.8.14.1.2 | 32 A | Each | 20.00 | 296.00 |
| 17.8.14.1.3 | 63 A | Each | 20.00 | 446.00 |
| 17.8.14.2 | Two pole | | | |
| 17.8.14.2.1 | 16 A | Each | 25.00 | 295.00 |
| 17.8.14.2.2 | 32 A | Each | 25.00 | 387.00 |
| 17.8.14.2.3 | 63 A | Each | 25.00 | 594.00 |
| 17.8.14.3 | Three pole | | | |

| Code No | Description | Unit | Rates in Rs. | |
|-------------|---|------|--------------|----------------|
| | | | Labour Rate | Complete Rate |
| 17.8.14.3.1 | 16 A | Each | 30.00 | 410.00 |
| 17.8.14.3.2 | 32 A | Each | 30.00 | 594.00 |
| 17.8.14.3.3 | 63 A | Each | 30.00 | 754.00 |
| 17.8.14.4 | Four pole | | | |
| 17.8.14.4.1 | 16 A | Each | 35.00 | 478.00 |
| 17.8.14.4.2 | 32 A | Each | 35.00 | 754.00 |
| 17.8.14.4.3 | 63 A | Each | 35.00 | 886.00 |
| 17.8.15 | P & F of ac operated heavy duty 230 /440 Volt power contactor conforming to IS:13947-4-1/IEC:947-4-1having provision of mechanical interlocking, Din rail mounting type including making connections, testing etc. as required. | | | |
| 17.8.15.1 | 3 pole AC3 Rating contactors . | | | |
| 17.8.15.1.1 | Up to 12 Amp | Each | 10.00 | 608.00 |
| 17.8.15.1.2 | 13 to 20 Amp | Each | 10.00 | 677.00 |
| 17.8.15.1.3 | 21to 25 Amp | Each | 10.00 | 918.00 |
| 17.8.15.1.4 | 26 to 32 Amp | Each | 10.00 | 1724.00 |
| 17.8.15.1.5 | 35 to 40 Amp | Each | 10.00 | 2471.00 |
| 17.8.15.1.6 | 41 to 50 Amp | Each | 10.00 | 3196.00 |
| 17.8.15.2 | 4 pole AC1 Rating contactors | | | |
| 17.8.15.2.1 | Up to 25 Amp | Each | 15.00 | 826.00 |
| 17.8.15.2.2 | 26to 32 Amp | Each | 15.00 | 860.00 |
| 17.8.15.2.3 | 33 to 45 Amp | Each | 15.00 | 1378.00 |
| 17.8.15.2.4 | 46 to 60 Amp | Each | 15.00 | 3448.00 |

| Code No | Description | Unit | Rates in Rs. | |
|-----------|---|------|--------------|----------------|
| | | | Labour Rate | Complete Rate |
| 17.8.16 | P & F of 440 Volt 3 pole capacitor (AC 6 B) duty contactor with 3 no. early make and post break auxiliary contacts in series with quick discharge damping resistors/ reactors to limit the inrush current , conforming to IS:13947-4-1/IEC:947-4-1, Din rail mounting type including making connections, testing etc. as required. suitable for following capacity capacitor bank. | | | |
| 17.8.16.1 | Up to 6 KVAR | Each | 10.00 | 918.00 |
| 17.8.16.2 | 7 to 10 KVAR | Each | 10.00 | 953.00 |
| 17.8.16.3 | 11 to 20 KVAR | Each | 10.00 | 2068.00 |
| 17.8.16.4 | 21 to 30 KVAR | Each | 10.00 | 2874.00 |
| 17.8.16.5 | 31 to 50 KVAR | Each | 10.00 | 6324.00 |
| 17.8.17 | P & F thermal over load relay with built in single phase protection and having at least 1NO & 1NC contacts, manual /auto reset facility including making connection testing etc. as required. | | | |
| 17.8.17.1 | Up to 14 Amp | Each | 15.00 | 803.00 |
| 17.8.17.2 | 15 to 20 Amp | Each | 15.00 | 872.00 |
| 17.8.17.3 | 21 to 30 Amp | Each | 15.00 | 958.00 |
| 17.8.17.4 | 31 to 40 Amp | Each | 15.00 | 1458.00 |
| 17.8.18 | P & F push button actuators and integral contact block of dia. 22.5 mm including making connection etc. as required. | | | |
| 17.8.18.1 | Non luminous type | Each | 10.00 | 85.00 |
| 17.8.18.2 | Luminous type | Each | 10.00 | 171.00 |
| 17.8.19 | P&F of removable Voltage surge protection device (surge arrester) for protection against transient over voltage (8/20 micro -seconds) and to run current waves to ground, making connection, testing etc. as required. (I _{max} =40 kA, U _p = 1.2kV, U _c =275 volts) | | | |

| Code No | Description | Unit | Rates in Rs. | |
|-----------|---|------|--------------|----------------|
| | | | Labour Rate | Complete Rate |
| 17.8.19.1 | one pole | Each | 10.00 | 2874.00 |
| 17.8.19.2 | Triple pole & neutral | Each | 20.00 | 8622.00 |
| 17.8.19.3 | Replacement of cartridge | Each | 10.00 | 1838.00 |
| 17.8.20 | P&F of mechanical / digital time switch having following day / week programme and minimum 100 hours reserve and AC1 rating of 16-20 amperes including making connection, programming etc. as required | | | |
| 17.8.20.1 | One day reserve (mechanical type) | Each | 20.00 | 2297.00 |
| 17.8.20.2 | One day & week reserve (mechanical type) | Each | 20.00 | 3332.00 |
| 17.8.20.3 | One day & week reserve (digital type) | Each | 30.00 | 5746.00 |
| 17.8.21 | P&F of IP51 direct or CT operated, 1x240 / 3x240 volts , 50 Hz static watt-hour meter (kwh) having resolution 0.1 / 0.01 kwh , 1/ 0.5 accuracy class , LED indicators for tamper operation (Reverse &/or earth connection) , pulsating LED indicator for meterology , electromechanical counter , cover plate for body and terminal sealing , including making connection ,testing etc. as required. | | | |
| 17.8.21.1 | up to 40 ampere single phase meter | Each | 10.00 | 1021.00 |
| 17.8.21.2 | up to 60 ampere three phase meter | Each | 15.00 | 2722.00 |
| 17.8.22 | P&F of thermoplastic/ PVC cable junction boxes of following minimum sizes with IP65/ IP55 protection including threaded cable glands made of polyamide material, terminals complete in all respect. | | | |
| 17.8.22.1 | 80x 80x 40(mm) (2.5 Sq. mm) | Each | 5.00 | 224.00 |
| 17.8.22.2 | 98 x 98 x 50 (mm) (4 Sq. mm) | Each | 8.00 | 269.00 |
| 17.8.22.3 | 139 x 119 x 70 (mm) (6 Sq. mm) | Each | 10.00 | 504.00 |
| 17.8.22.4 | 150 x 110 x 70 (mm) (10 Sq. mm) | Each | 12.00 | 642.00 |
| 17.8.22.5 | 190 x 140 x 70 (mm) (16/ 25 Sq. mm) | Each | 15.00 | 1176.00 |

| Code No | Description | Unit | Rates in Rs. | |
|-----------|--------------------------------------|------|--------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.8.22.6 | 210 x 300 x 116 (mm) (35/50 Sq. mm) | Each | 20.00 | 4252.00 |
| 17.8.22.7 | 300 x 400 x 170 (mm) (50/ 70 Sq. mm) | Each | 25.00 | 7816.00 |

Note: 1 Deduct 5 %on the rates of Group1 for rates of Group2 Item.

Note: 2 Add Rs. 2500.00 on rates of CODE NO EO81300 for APFC Relay having multi parameter metering facility like kW, kVA, kVAr, THD etc.

Note: 3 Interconnection between bus bar and switchgears /cable shall be rigidly supported and made out by flexible copper wires (up to 125 amp) and by solid bus bar (>125 amp) . All joints / interconnections of copper bus bar shall be dully tinned . Clearance between main bus bar and risers / metal parts shall be at least 10 mm additional to width of bus bar . Bus bar is insulated by Heat Shrinkable sleeves . Earth and Neutral bus bar shall be half of the size of phase bus bar.

17.9 AIR-CIRCUIT BREAKER & MCCB

| Code No. | Description | Unit | Rate in Rs. | | | | |
|------------|--|------|-------------|-----------|-----------|---------|---------|
| | | | Labour Rate | 3 pole | 4 pole | Group 1 | Group 2 |
| 17.9.1 | SITC of fixed / Draw out type Air Circuit Breaker of conforming to IS 13947 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable short-circuit ,earth fault and over load static release with separate LED indication for each type of fault , at least 4NO & 4NC auxiliary contacts safety shutter and fault position acknowledgement mechanism . type ACB shall have separate indication for service , test , isolation , maintenance position | | | | | | |
| 17.9.1.1 | Fixed type | | | | | | |
| 17.9.1.1.1 | 800 A Rating , 50 kA | Each | 3500.00 | 48925.00 | 62725.00 | | |
| 17.9.1.1.2 | 1000 A Rating , 50kA | Each | 3500.00 | 51225.00 | 65025.00 | | |
| 17.9.1.1.3 | 1250 A Rating , 50 kA | Each | 3500.00 | 68475.00 | 89175.00 | | |
| 17.9.1.1.4 | 1600 A Rating , 50 /65 kA | Each | 3500.00 | 73075.00 | 93775.00 | | |
| 17.9.1.1.5 | 2000 A Rating , 65 kA | Each | 3500.00 | 81125.00 | 105275.00 | | |
| 17.9.1.1.6 | 2500 A Rating , 65 kA | Each | 3500.00 | 92625.00 | 120225.00 | | |
| 17.9.1.1.7 | 3200 A Rating , 65 kA | Each | 3500.00 | 136325.00 | 171975.00 | | |
| 17.9.1.2 | Draw out type (Manual spring charged) | | | | | | |
| 17.9.1.2.1 | 800 A Rating , 50 kA | Each | 4000.00 | 73000.00 | 92550.00 | | |
| 17.9.1.2.2 | 1000 A Rating , 50 kA | Each | 4000.00 | 75300.00 | 97150.00 | | |
| 17.9.1.2.3 | 1250 A Rating , 50 kA | Each | 4000.00 | 92550.00 | 121300.00 | | |
| 17.9.1.2.4 | 1600 A Rating , 50 / 65kA | Each | 4000.00 | 101750.00 | 130500.00 | | |
| 17.9.1.2.5 | 2000 A Rating , 65 kA | Each | 4000.00 | 123600.00 | 158100.00 | | |
| 17.9.1.2.6 | 2500 A Rating , 65 kA | Each | 4000.00 | 143150.00 | 182250.00 | | |
| 17.9.1.2.7 | 3200 A Rating , 65 kA | Each | 4000.00 | 186850.00 | 235150.00 | | |
| 17.9.1.3 | Draw out type (Motorised charging) | | | | | | |
| 17.9.1.3.1 | 800 A Rating , 50 kA | Each | 4000.00 | 91400.00 | 120150.00 | | |
| 17.9.1.3.2 | 1000 A Rating , 50 kA | Each | 4000.00 | 92550.00 | 122450.00 | | |
| 17.9.1.3.3 | 1250 A Rating , 50 kA | Each | 4000.00 | 114400.00 | 148900.00 | | |

| Code No. | Description | Unit | Rate in Rs. | | | | |
|------------|--|------|-------------|-----------|-----------|---------|---------|
| | | | Labour Rate | 3 pole | 4 pole | Group 1 | Group 2 |
| 17.9.1.3.4 | 1600 A Rating , 50 / 65kA | Each | 4000.00 | 125900.00 | 160400.00 | | |
| 17.9.1.3.5 | 2000 A Rating , 65 kA | Each | 4000.00 | 152350.00 | 194900.00 | | |
| 17.9.1.3.6 | 2500 A Rating , 65 kA | Each | 4000.00 | 181100.00 | 223650.00 | | |
| 17.9.1.3.7 | 3200 A Rating , 65 kA | Each | 4000.00 | 229400.00 | 286900.00 | | |
| 17.9.2 | SITC of fixed / Draw out type Air Circuit Breaker of conforming to IS 13947 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable short-circuit, earth fault and over load MICRO-PROCESSOR release with LCD display, bargraph and separate LED indication for each type of fault , at least 4NO & 4NC auxiliary contacts safety shutter and fault position acknowledgement mechanism . type ACB shall have separate indication for service, test, isolation, maintenance position | | | | | | |
| 17.9.2.1 | Fixed type | | | | | | |
| 17.9.2.1.1 | 800 A Rating , 50 kA | Each | 3500.00 | 61575.00 | | | |
| 17.9.2.1.2 | 1000 A Rating , 50 kA | Each | 3500.00 | 63875.00 | | | |
| 17.9.2.1.3 | 1250 A Rating , 50 kA | Each | 3500.00 | 82275.00 | | | |
| 17.9.2.1.4 | 1600 A Rating , 50 / 65kA | Each | 3500.00 | 86875.00 | | | |
| 17.9.2.1.5 | 2000 A Rating , 65 kA | Each | 3500.00 | 91475.00 | | | |
| 17.9.2.1.6 | 2500 A Rating , 65 kA and above | Each | 4000.00 | 96000.00 | | | |
| 17.9.2.1.7 | 3200 A Rating ,65 kA and above | Each | 3500.00 | 132875.00 | | | |
| 17.9.2.2 | Draw out type (Manual spring charged) | | | | | | |
| 17.9.2.2.1 | 800 A Rating , 50kA | Each | 4000.00 | 79900.00 | 101750.00 | | |
| 17.9.2.2.2 | 1000 A Rating , 50kA | Each | 4000.00 | 87950.00 | 107500.00 | | |
| 17.9.2.2.3 | 1250 A Rating ,50kA | Each | 4000.00 | 100600.00 | 132800.00 | | |
| 17.9.2.2.4 | 1600 A Rating ,50 / 65kA | Each | 4000.00 | 110950.00 | 143150.00 | | |
| 17.9.2.2.5 | 2000 A Rating ,65 kA | Each | 4000.00 | 132800.00 | 162700.00 | | |
| 17.9.2.2.6 | 2500 A Rating ,65 kA | Each | 4000.00 | 151200.00 | 193750.00 | | |
| 17.9.2.2.7 | 3200 A Rating ,65 kA | Each | 4000.00 | 198350.00 | 252400.00 | | |

| Code No. | Description | Unit | Rate in Rs. | | | | |
|-------------|--|------|-------------|-----------|-----------|---------|---------|
| | | | Labour Rate | 3 pole | 4 pole | Group 1 | Group 2 |
| 17.9.2.3 | Draw out type (Motorised charging) | | | | | | |
| 17.9.2.3.1 | 800 A Rating , 50kA | Each | 4000.00 | 98300.00 | 128200.00 | | |
| 17.9.2.3.2 | 1000 A Rating , 50kA | Each | 4000.00 | 108650.00 | 139700.00 | | |
| 17.9.2.3.3 | 1250 A Rating ,50kA | Each | 4000.00 | 125900.00 | 165000.00 | | |
| 17.9.2.3.4 | 1600 A Rating ,50 / 65kA | Each | 4000.00 | 137400.00 | 177650.00 | | |
| 17.9.2.3.5 | 2000 A Rating ,65 kA | Each | 4000.00 | 166150.00 | 200650.00 | | |
| 17.9.2.3.6 | 2500 A Rating ,65 kA | Each | 4000.00 | 185700.00 | 240900.00 | | |
| 17.9.2.3.7 | 3200 A Rating ,65 kA | Each | 4000.00 | 240900.00 | 315650.00 | | |
| 17.9.3 | SITC of fixed / Draw out/ EDO type Air Circuit Breaker of conforming to IS 13947 in existing LT panel suitable for LT installation 440 V ,50 Hz and having adjustable short-circuit ,earth fault and over load Thermal magnetic release with at least 4NO & 4NC auxiliary contacts safety shutter and fault position acknowledgement mechanism . type ACB shall have separate indication for service , test , isolation , maintenance position | | | | | | |
| 17.9.3.1 | Fixed type | | | | | | |
| 17.9.3.1.1 | 800 A Rating , 50 kA | Each | 3500.00 | 45475.00 | 58125.00 | | |
| 17.9.3.1.2 | 1000 A Rating , 50kA | Each | 3500.00 | 45475.00 | 59850.00 | | |
| 17.9.3.1.3 | 1250 A Rating , 50 kA | Each | 3500.00 | 63875.00 | 82850.00 | | |
| 17.9.3.1.4 | 1600 A Rating , 50 /65 kA | Each | 3500.00 | 67900.00 | 86875.00 | | |
| 17.9.3.1.5 | 2000 A Rating , 65 kA | Each | 3500.00 | 75375.00 | 97800.00 | | |
| 17.9.3.1.6 | 2500 A Rating , 65 kA | Each | 3500.00 | 85725.00 | 105275.00 | | |
| 17.9.3.1.7 | 3200 A Rating , 65 kA | Each | 3500.00 | 126550.00 | 157025.00 | | |
| 17.9.3.2 | Draw out type (Manual spring charged) | | | | | | |
| 17.9.3.2 .1 | 800 A Rating , 50 kA | Each | 4000.00 | 67250.00 | 85650.00 | | |
| 17.9.3.2 .2 | 1000 A Rating , 50 kA | Each | 4000.00 | 68400.00 | 90250.00 | | |
| 17.9.3.2 .3 | 1250 A Rating , 50 kA | Each | 4000.00 | 85650.00 | 107500.00 | | |
| 17.9.3.2 .4 | 1600 A Rating , 50 / 65kA | Each | 4000.00 | 94850.00 | 121300.00 | | |
| 17.9.3.2 .5 | 2000 A Rating , 65 kA | Each | 4000.00 | 114400.00 | 146600.00 | | |
| 17.9.3.2 .6 | 2500 A Rating , 65 kA | Each | 4000.00 | 132800.00 | 168450.00 | | |

| Code No. | Description | Unit | Rate in Rs. | | | | |
|-------------------|---|-------------|----------------|------------------|------------------|----------|---------|
| | | | Labour Rate | 3 pole | 4 pole | Group 1 | Group 2 |
| 17.9.3.2 .7 | 3200 A Rating , 65 kA | Each | 4000.00 | 169600.00 | 217900.00 | | |
| 17.9.3.3 | Draw out type (Motorised charging) | | | | | | |
| 17.9.3.3.1 | 800 A Rating , 50 kA | Each | 4000.00 | 84500.00 | 107500.00 | | |
| 17.9.3.3.2 | 1000 A Rating , 50 kA | Each | 4000.00 | 85075.00 | 108650.00 | | |
| 17.9.3.3.3 | 1250 A Rating , 50 kA | Each | 4000.00 | 106890.00 | 137400.00 | | |
| 17.9.3.3.4 | 1600 A Rating , 50 / 65kA | Each | 4000.00 | 116700.00 | 148900.00 | | |
| 17.9.3.3.5 | 2000 A Rating , 65 kA | Each | 4000.00 | 142000.00 | 181100.00 | | |
| 17.9.3.3.6 | 2500 A Rating , 65 kA | Each | 4000.00 | 167300.00 | 208700.00 | | |
| 17.9.3.3.7 | 3200 A Rating , 65 kA | Each | 4000.00 | 213300.00 | 263900.00 | | |
| 17.9.4 | Supply and fixing of following accessories for ACB | | | | | | |
| 17.9.4.1 | Shunt Trip Release | Each | 100.00 | | | 1710.00 | 1365.00 |
| 17.9.4.2 | Under Voltage Release | Each | 100.00 | | | 2285.00 | 1940.00 |
| 17.9.4.3 | Earth Fault Release | Each | 100.00 | | | 1710.00 | 1365.00 |
| 17.9.5 | SITC of quick make and quick break 3 POLE current limiting MCCB having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings and conforming to IS 13947-2 / IEC 60947-2 with front face and centralised adjustable, line load interchangeability, having positive isolation capability, provision for UVR , shunt trip , earth fault trip, push (test) to trip, including making connections with lugs / spreaders etc. as required | | | | | | |
| 17.9.5.1 | With Thermal Magnetic release | | | | | | |
| 17.9.5.1 .1 | up to 100 Amp , 10 kA, fixed O/L & S/C setting | Each | 100.00 | | | 2342.00 | 1882.00 |
| 17.9.5.1 .2 | up to 100 Amp , 16/25 kA, adjustable O/L & fixed S/C setting | Each | 100.00 | | | 4815.00 | 3608.00 |
| 17.9.5.1 .3 | 160 Amp , 16/25 kA, adjustable O/L & fixed S/C setting | Each | 100.00 | | | 6252.00 | 3665.00 |
| 17.9.5.1 .4 | 200 Amp , 25/35kA, adjustable O/L & fixed S/C setting | Each | 100.00 | | | 11312.00 | 5850.00 |
| 17.9.5.1 .5 | 200 Amp , 25/35kA, adjustable O/L & adjustable S/C setting | Each | 100.00 | | | 15165.00 | 7575.00 |

| Code No. | Description | Unit | Rate in Rs. | | | | |
|-------------|---|------|-------------|--------|--------|----------|----------|
| | | | Labour Rate | 3 pole | 4 pole | Group 1 | Group 2 |
| 17.9.5.1 .6 | 250 Amp , 35/40kA, adjustable O/L & fixed S/C setting | Each | 200.00 | | | 13885.00 | 7790.00 |
| 17.9.5.1 .7 | 250 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 14690.00 | 12218.00 |
| 17.9.5.1 .8 | 400 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 17278.00 | 12390.00 |
| 17.9.5.1 .9 | 630 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 19744.00 | 14172.00 |
| 17.9.5.2 | With Microprocessor based Release | | | | | | |
| 17.9.5.2 .1 | up to 100 Amp , 16 kA, adjustable O/L & adjustable S/C setting | Each | 100.00 | | | 10200.00 | 8000.00 |
| 17.9.5.2 .2 | 160 Amp , 16/25 kA, adjustable O/L & adjustable S/C setting | Each | 100.00 | | | 13600.00 | 11000.00 |
| 17.9.5.2 .3 | 200 Amp , 25/35kA, adjustable O/L & adjustable S/C setting | Each | 100.00 | | | 16000.00 | 14000.00 |
| 17.9.5.2 .4 | 250 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 17800.00 | 16000.00 |
| 17.9.5.2 .5 | 400 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 18800.00 | 16500.00 |
| 17.9.5.2 .6 | 630 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 23500.00 | 20000.00 |
| 17.9.6 | SITC of quick make and quick break 4 POLE current limiting MCCB having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings and conforming to IS 13947-2 / IEC 60947-2 with front face and centralised adjustable, line load interchangeability, having positive isolation capability, provision for UVR , shunt trip ,earth fault trip, push (test) to trip , including making connections with lugs / spreaders etc. as required | | | | | | |
| 17.9.6.1 | With Thermal Magnetic Release | | | | | | |
| 17.9.6.1.1 | up to 100 Amp , 10 kA, fixed O/L & S/C setting | Each | 100.00 | | | 4068.00 | 2458.00 |
| 17.9.6.1.2 | up to 100 Amp , 16/25 kA, adjustable O/L & fixed S/C setting | Each | 100.00 | | | 6931.00 | 4642.00 |
| 17.9.6.1.3 | 160 Amp, 16/25 kA, adjustable O/L & fixed S/C setting | Each | 100.00 | | | 8840.00 | 6080.00 |

| Code No. | Description | Unit | Labour Rate | Rate in Rs. | | | |
|------------|---|------|-------------|-------------|--------|----------|----------|
| | | | | 3 pole | 4 pole | Group 1 | Group 2 |
| 17.9.6.1.4 | 200 Amp, 25/35 kA, adjustable O/L & fixed S/C setting | | 100.00 | | | 12635.00 | 6310.00 |
| 17.9.6.1.5 | 250 Amp, 35/40kA, adjustable O/L & fixed S/C setting | Each | 200.00 | | | 17450.00 | 10090.00 |
| 17.9.6.1.6 | 250 Amp, 35/50kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 20268.00 | 15840.00 |
| 17.9.6.1.7 | 400 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 22740.00 | 16047.00 |
| 17.9.6.1.8 | 630 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 25040.00 | 18347.00 |
| 17.9.6.2 | With Microprocessor based Release | | | | | | |
| 17.9.6.2.1 | up to 100 Amp, 16 kA, adjustable O/L & adjustable S/C setting | Each | 100.00 | | | 13250.00 | 11500.00 |
| 17.9.6.2.2 | 160 Amp, 16/25 kA, adjustable O/L & adjustable S/C setting | Each | 100.00 | | | 17800.00 | 15000.00 |
| 17.9.6.2.3 | 200 Amp, 25/35 kA, adjustable O/L & adjustable S/C setting | Each | 100.00 | | | 22000.00 | 19000.00 |
| 17.9.6.2.4 | 250 Amp, 35/50kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 24000.00 | 20000.00 |
| 17.9.6.2.5 | 400 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 26000.00 | 23000.00 |
| 17.9.6.2.6 | 630 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting | Each | 200.00 | | | 29000.00 | 25000.00 |
| 17.9.7 | Supply and fixing of following accessories for MCCB | | | | | | |
| 17.9.7.1 | Shunt trip Release | Each | 50.00 | | | 912.00 | 682.00 |
| 17.9.7.2 | Under Voltage Release | Each | 50.00 | | | 912.00 | 682.00 |
| 17.9.7.3 | Earth Fault Module | Each | 50.00 | | | 1372.00 | 1142.00 |
| 17.9.7.4 | Motor mechanism for 250A EDO MCCB (240V, 50Hz) | Each | | | | 12000.00 | 10000.00 |
| 17.9.7.5 | Motor mechanism for 400A EDO MCCB (240V, 50Hz) | Each | | | | 16000.00 | 14000.00 |
| 17.9.7.6 | Motor mechanism for 630A EDO MCCB (240V, 50Hz) | Each | | | | 17000.00 | 15000.00 |
| NOTE1 | Add 7.5 % on the Rate of Group2 ACB for Group1 ACB. | | | | | | |
| NOTE2 | Add 3 % extra on the Rate of MCCB having Ics= 100% Icu. | | | | | | |
| NOTE3 | Short Circuit Breaking capacity and model of makes of MCCB/ ACB can be mentioned in G-Schedule / Estimate to arrive actual tendered rate. | | | | | | |

17.10 SWITCH FUSE UNITS, FSU AND CHANGEOVER SWITCH

| Code No | Description | Unit | Rate in Rs. | | |
|-------------|---|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.10.1 | P&F 240 V metal clad rewire able porcelain switch fuse unit conforming to IS:13947 P-I&III including making connections with lugs, testing etc. as required. | | | | |
| 17.10.1.1 | Single pole & neutral | | | | |
| 17.10.1.1.1 | 16 A / 240 V | Each | 20.00 | 216.00 | 146.00 |
| 17.10.1.1.2 | 32 A / 240 V | Each | 20.00 | 572.00 | 342.00 |
| 17.10.1.1.3 | 63 A / 240 V | Each | 20.00 | 1325.00 | 860.00 |
| 17.10.1.2 | Double pole | | | | |
| 17.10.1.2.1 | 16 A / 240 V | Each | 20.00 | 227.00 | 158.00 |
| 17.10.1.2.2 | 32 A / 240 V | Each | 20.00 | 687.00 | 422.00 |
| 17.10.1.2.3 | 63 A / 240 V | Each | 20.00 | 1607.00 | 1090.00 |
| 17.10.2 | P&F TP&N 415 V metal clad HBC cum rewire able switch fuse unit with porcelain kit-kat & neutral link and conforming to IS:13947 P-I&III and making connections with lugs testing etc. as required. | | | | |
| 17.10.2.1 | 16 A rating | Each | 25.00 | 663.00 | 571.00 |
| 17.10.2.2 | 32 A rating | Each | 25.00 | 905.00 | 715.00 |
| 17.10.2.3 | 63 A rating | Each | 30.00 | 2060.00 | 1824.00 |
| 17.10.2.4 | 100 A rating | Each | 30.00 | 3768.00 | 3330.00 |
| 17.10.3 | P&F TP&N 415 V side handle operated double break fuse switch unit in sheet steel enclosure conforming to IS: 13947 P-III and IS:4064 (W/O HBC fuses) including making connections with suitable lugs, testing etc. as required. | | | | |
| 17.10.3.1 | 63 A rating | Each | 30.00 | 3446.00 | 2526.00 |
| 17.10.3.2 | 100 A rating | Each | 30.00 | 4366.00 | 3446.00 |
| 17.10.3.3 | 200 A rating | Each | 40.00 | 5974.00 | 4594.00 |
| 17.10.3.4 | 300/320 A rating | Each | 40.00 | 8044.00 | 5744.00 |
| 17.10.3.5 | 400 A rating | Each | 50.00 | 9768.00 | 7468.00 |
| 17.10.3.6 | 500/630 A rating | Each | 50.00 | 17818.00 | 14368.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|--|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.10.4 | P&F TP&N 415 V AC-23A front handle operated switch disconnecter fuse unit, cubical type, without metallic enclosure, conforming to IS:13947 P-III in existing panel (W/O HBC fuses) including making connections with lugs, testing etc as required. | | | | |
| 17.10.4.1 | 32 A rating | Each | 50.00 | 1315.00 | 1004.00 |
| 17.10.4.2 | 63 A rating | Each | 50.00 | 2062.00 | 1602.00 |
| 17.10.4.3 | 100/125 A rating | Each | 60.00 | 4591.00 | 3136.00 |
| 17.10.4.4 | 200 A rating | Each | 60.00 | 5396.00 | 4706.00 |
| 17.10.4.5 | 250 A rating | Each | 80.00 | 6543.00 | 4950.00 |
| 17.10.4.6 | 300/320 A rating | Each | 80.00 | 8153.00 | 6140.00 |
| 17.10.4.7 | 400 A rating | Each | 80.00 | 9936.00 | 7463.00 |
| 17.10.4.8 | 630 A rating | Each | 100.00 | 14878.00 | 12635.00 |
| 17.10.5 | P&F Insulated DMC fuse bases suitable for Din type HBC fuse links conforming to IS:9224-79 including making connections with lugs, testing etc. as required. | | | | |
| 17.10.5.1 | 125 A rating | Each | 15.00 | 199.00 | 147.00 |
| 17.10.5.2 | 250 A rating | Each | 15.00 | 406.00 | 297.00 |
| 17.10.5.3 | 400 A rating | Each | 20.00 | 566.00 | 394.00 |
| 17.10.5.4 | 630 A rating | Each | 20.00 | 802.00 | 572.00 |
| 17.10.6 | P&F bakelite fuse fitting for HBC fuse links (front/bus bar connections) w/o HBC fuses on existing board including making connections with lugs, testing etc. as required. | | | | |
| 17.10.6.1 | 20 A rating | Each | 10.00 | 79.00 | 68.00 |
| 17.10.6.2 | 32 A rating | Each | 10.00 | 125.00 | 102.00 |
| 17.10.6.3 | 63 A rating | Each | 20.00 | 146.00 | 118.00 |
| 17.10.6.4 | 100 A rating | Each | 20.00 | 428.00 | 325.00 |
| 17.10.7 | P&F 240/415 V porcelain kitkat fuse (/HBC type) conforming to IS:2086,1983 On existing board/ sheet including making connections with lugs, testing etc. as required | | | | |
| 17.10.7.1 | 16 A ,240 V | Each | 10.00 | 42.00 | 33.00 |
| 17.10.7.2 | 16 A ,415 V | Each | 10.00 | 79.00 | 62.00 |
| 17.10.7.3 | 32 A ,240 V | Each | 10.00 | 79.00 | 62.00 |
| 17.10.7.4 | 32 A ,415 V | Each | 10.00 | 96.00 | 73.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|--------------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.10.7.5 | 63 A , 415 V | Each | 20.00 | 158.00 | 124.00 |
| 17.10.7.6 | 100 A ,415 V | Each | 20.00 | 284.00 | 227.00 |
| 17.10.7.7 | 200 A , 415 V | Each | 20.00 | 572.00 | 457.00 |
| 17.10.7.8 | 320 A , 415 V | Each | 20.00 | 1032.00 | 825.00 |
| 17.10.8 | P&F 240/415 V triple pole vertical type fuse switch (W/O HBC fuses) suitable for directly connecting to bus bar and conforming to IS:13947 P-III including making connections with lugs, testing etc as required. | | | | |
| 17.10.8.1 | 250 A | Each | 120.00 | 5157.00 | |
| 17.10.8.2 | 400 A | Each | 120.00 | 5985.00 | |
| 17.10.8.3 | 630 A | Each | 150.00 | 7452.00 | |
| 17.10.9 | P&F bolted type/ Din type HBC (High breaking capacity) fuse links of 80 KA breaking capacity, conforming to IS:13703 in the existing fuse base, fuse switch unit etc. of the following type and rating. | | | | |
| 17.10.9.1 | Offset tag type | | | | |
| 17.10.9.1.1 | 2 A to 20 A | Each | 2.00 | 56.00 | 33.00 |
| 17.10.9.1.2 | 25 A to 32 A | Each | 2.00 | 63.00 | 41.00 |
| 17.10.9.1.3 | 35 A to 63 A | Each | 2.00 | 74.00 | 57.00 |
| 17.10.9.1.4 | 80 A to 125 A | Each | 2.00 | 149.00 | 126.00 |
| 17.10.9.2 | Central tag type | | | | |
| 17.10.9.2.1 | 80 A to 125 A | Each | 2.00 | 166.00 | 143.00 |
| 17.10.9.2.2 | 160 A to 200 A | Each | 5.00 | 183.00 | 154.00 |
| 17.10.9.2.3 | 250 A to 315 A | Each | 5.00 | 258.00 | 229.00 |
| 17.10.9.2.4 | 400 A to 630 A | Each | 5.00 | 747.00 | 632.00 |
| 17.10.9.3 | Din (knife type) type | | | | |
| 17.10.9.3.1 | 6 A to 160 A | Each | 2.00 | 258.00 | 149.00 |
| 17.10.9.3.2 | 32 A to 250 A | Each | 5.00 | 390.00 | 252.00 |
| 17.10.9.3.3 | 200 A to 400 A | Each | 5.00 | 632.00 | 379.00 |
| 17.10.9.3.4 | 425 A to 630 A | Each | 5.00 | 862.00 | 551.00 |
| 17.10.10 | P&F onload change over switch, front handle operated, four pole 415 V conforming to IS:13947 P-III including connections , testing etc. as required in the following rating: | | | | |
| 17.10.10.1 | Open execution type | | | | |
| 17.10.10.1.1 | 63 A | Each | 50.00 | 3212.00 | 2868.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|--------------|---|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.10.10.1.2 | 125 A | Each | 75.00 | 5192.00 | 3554.00 |
| 17.10.10.1.3 | 200 A | Each | 100.00 | 7000.00 | 6425.00 |
| 17.10.10.1.4 | 250 A | Each | 100.00 | 9760.00 | 8495.00 |
| 17.10.10.1.5 | 320 A | Each | 100.00 | 10680.00 | 8955.00 |
| 17.10.10.1.6 | 400 A | Each | 150.00 | 15042.00 | 12398.00 |
| 17.10.10.1.7 | 630 A | Each | 150.00 | 17458.00 | 16308.00 |
| 17.10.10.1.8 | 800 A | Each | 200.00 | 24695.00 | 21015.00 |
| 17.10.10.1.9 | 1000 A | Each | 200.00 | 34470.00 | 32170.00 |
| 17.10.10.2 | With sheet steel enclosure | | | | |
| 17.10.10.2.1 | 63 A | Each | 40.00 | 4422.00 | 3559.00 |
| 17.10.10.2.2 | 125 A | Each | 60.00 | 6776.00 | 5108.00 |
| 17.10.10.2.3 | 200 A | Each | 80.00 | 8268.00 | 7406.00 |
| 17.10.10.2.4 | 250 A | Each | 80.00 | 11258.00 | 9476.00 |
| 17.10.10.2.5 | 320 A | Each | 80.00 | 11718.00 | 9993.00 |
| 17.10.10.2.6 | 400 A | Each | 120.00 | 16312.00 | 13494.00 |
| 17.10.10.2.7 | 630 A | Each | 120.00 | 19302.00 | 17542.00 |
| 17.10.10.2.8 | 800 A | Each | 150.00 | 25278.00 | 22748.00 |
| 17.10.10.2.9 | 1000 A | Each | 150.00 | 44252.00 | 37582.00 |
| 17.10.11 | S&F off load change over switch four pole/2 pole, 230/415 V ,conforming to IS:13947 P-III in sheet steel enclosure complete with connections with lugs, testing etc. as required in the following rating: | | | | |
| | Double pole | | | | |
| 17.10.11.1.1 | 16 A Double pole | Each | 25.00 | 514.00 | 399.00 |
| 17.10.11.1.2 | 32 A Double pole | Each | 25.00 | 790.00 | 629.00 |
| | Four pole | | | | |
| 17.10.11.2 | 16 A four pole | Each | 30.00 | 1203.00 | 973.00 |
| 17.10.11.2.1 | 32 A four pole | Each | 30.00 | 1433.00 | 1088.00 |
| 17.10.11.2.2 | 63 A four pole | Each | 50.00 | 2695.00 | 2120.00 |
| 17.10.11.2.3 | 100 A four pole | Each | 50.00 | 5340.00 | 3960.00 |
| 17.10.11.2.4 | 200 A four pole | Each | 75.00 | 7349.00 | 6141.00 |
| 17.10.11.2.5 | 250 A four pole | Each | 75.00 | 8039.00 | 6889.00 |
| 17.10.11.2.6 | 320 A four pole | Each | 100.00 | 9358.00 | 8150.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|--------------|------------------|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.10.11.2.7 | 400 A four pole | Each | 120.00 | 12057.00 | 9584.00 |
| 17.10.11.2.8 | 630 A four pole | Each | 150.00 | 18838.00 | 14928.00 |
| 17.10.11.2.9 | 800 A four pole | Each | 150.00 | 24128.00 | 19298.00 |
| 17.10.11.3 | 1000 A four pole | Each | 150.00 | 31028.00 | 24702.00 |

17.11 CABLES

| Code No | Description | Unit | Rate excluding cost of cable | Comp Rate in Rs. | | | |
|---------------------|---|------|------------------------------|------------------|---------|---------------|---------------|
| | | | | Armoured | | Unarmoured | |
| | | | | Group-1 | Group-2 | Group-1 | Group-2 |
| Power Cables | | | | | | | |
| 17.11.1 | P/Laying XLPE insulated / P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor Armoured of IS:7098-I/1554-1 approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size. | | | | | | |
| 17.11.1.1 | 2.5 Sq. mm | | | | | | |
| 17.11.1.1.A | 2 core | Mtr. | 40.00 | 91.08 | 82.80 | 71.28 | 64.80 |
| 17.11.1.1.B | 3 core | Mtr. | 40.00 | 93.72 | 85.20 | 73.92 | 67.20 |
| 17.11.1.1.C | 4 core | Mtr. | 40.00 | 99.00 | 90.00 | 77.88 | 70.80 |
| 17.11.1.2 | 4.0 Sq.mm | | | | | | |
| 17.11.1.2.A | 2 core | Mtr. | 40.00 | 92.40 | 84.00 | 76.56 | 69.60 |
| 17.11.1.2.B | 3 core | Mtr. | 40.00 | 97.68 | 88.80 | 80.52 | 73.20 |
| 17.11.1.2.C | 4 core | Mtr. | 40.00 | 101.64 | 92.40 | 80.52 | 73.20 |
| 17.11.1.3 | 6.0 Sq.mm | | | | | | |
| 17.11.1.3.A | 2 core | Mtr. | 40.00 | 97.68 | 88.80 | 81.84 | 74.40 |
| 17.11.1.3.B | 3 core | Mtr. | 40.00 | 104.28 | 94.80 | 87.12 | 79.20 |
| 17.11.1.3.C | 4 core | Mtr. | 40.00 | 110.88 | 100.80 | 93.72 | 85.20 |
| 17.11.1.4 | 10.0 Sq.mm | | | | | | |
| 17.11.1.4.A | 2 core | Mtr. | 40.00 | 106.92 | 97.20 | 89.76 | 81.60 |
| 17.11.1.4.B | 3 core | Mtr. | 40.00 | 117.48 | 106.80 | 96.36 | 87.60 |
| 17.11.1.4.C | 4 core | Mtr. | 40.00 | 118.80 | 108.00 | 104.28 | 94.80 |
| 17.11.1.5 | 16.0 Sq.mm | | | | | | |
| 17.11.1.5.A | 2 core | Mtr. | 40.00 | 117.48 | 106.80 | 99.00 | 90.00 |
| 17.11.1.5.B | 3 core | Mtr. | 40.00 | 129.36 | 117.60 | 117.48 | 106.80 |
| 17.11.1.5.C | 4 core | Mtr. | 40.00 | 145.20 | 132.00 | 125.40 | 114.00 |
| 17.11.1.6 | 25.0 Sq.mm | | | | | | |

| Code No | Description | Unit | Rate excluding cost of cable | Comp Rate in Rs. | | | |
|--------------|-------------|------|------------------------------|------------------|---------|---------------|---------------|
| | | | | Armoured | | Unarmoured | |
| | | | | Group-1 | Group-2 | Group-1 | Group-2 |
| 17.11.1.6.A | 2 core | Mtr. | 40.00 | 124.08 | 112.80 | 108.24 | 98.40 |
| 17.11.1.6.B | 3 core | Mtr. | 40.00 | 139.92 | 127.20 | 129.36 | 117.60 |
| 17.11.1.6.C | 3.5 core | Mtr. | 40.00 | 154.44 | 140.40 | 141.24 | 128.40 |
| 17.11.1.6.D | 4 core | Mtr. | 40.00 | 165.00 | 150.00 | 151.80 | 138.00 |
| 17.11.1.7 | 35.0 Sq.mm | | | | | | |
| 17.11.1.7.A | 1 core | Mtr. | 40.00 | 99.00 | 90.00 | 90.75 | 82.50 |
| 17.11.1.7.B | 2 core | Mtr. | 40.00 | 171.60 | 156.00 | 150.15 | 136.50 |
| 17.11.1.7.C | 3 core | Mtr. | 40.00 | 199.65 | 181.50 | 181.50 | 165.00 |
| 17.11.1.7.D | 3.5 core | Mtr. | 40.00 | 217.80 | 198.00 | 199.65 | 181.50 |
| 17.11.1.8 | 50.0 Sq.mm | | | | | | |
| 17.11.1.8.A | 1core | Mtr. | 40.00 | 143.55 | 130.50 | 115.50 | 105.00 |
| 17.11.1.8.B | 2 core | Mtr. | 40.00 | 199.65 | 181.50 | 174.90 | 159.00 |
| 17.11.1.8.C | 3 core | Mtr. | 40.00 | 240.90 | 219.00 | 216.15 | 196.50 |
| 17.11.1.8.D | 3.5 core | Mtr. | 40.00 | 264.00 | 240.00 | 242.55 | 220.50 |
| 17.11.1.9 | 70.0 Sq,mm | | | | | | |
| 17.11.1.9.A | 1core | Mtr. | 45.00 | 194.91 | 177.19 | 155.93 | 141.75 |
| 17.11.1.9.B | 2 core | Mtr. | 45.00 | 272.87 | 248.06 | 246.88 | 224.44 |
| 17.11.1.9.C | 3 core | Mtr. | 45.00 | 335.98 | 305.44 | 309.99 | 281.81 |
| 17.11.1.9.D | 3.5 core | Mtr. | 45.00 | 371.25 | 337.50 | 348.98 | 317.25 |
| 17.11.1.10 | 95.0 Sq.mm | | | | | | |
| 17.11.1.10.A | 1core | Mtr. | 45.00 | 239.09 | 217.35 | 201.66 | 183.33 |
| 17.11.1.10.B | 2 core | Mtr. | 45.00 | 374.22 | 340.20 | 347.19 | 315.63 |
| 17.11.1.10.C | 3 core | Mtr. | 45.00 | 459.46 | 417.69 | 415.80 | 378.00 |
| 17.11.1.10.D | 3.5 core | Mtr. | 45.00 | 511.43 | 464.94 | 485.10 | 441.00 |
| 17.11.1.11 | 120.0 Sq.mm | | | | | | |
| 17.11.1.11.A | 1 core | Mtr. | 45.00 | 261.95 | 238.14 | 224.53 | 204.12 |
| 17.11.1.11.B | 2 core | Mtr. | 45.00 | 440.75 | 400.68 | 399.17 | 362.88 |
| 17.11.1.11.C | 3 core | Mtr. | 45.00 | 534.30 | 485.73 | 501.04 | 455.49 |
| 17.11.1.11.D | 3.5 core | Mtr. | 45.00 | 607.07 | 551.88 | 571.73 | 519.75 |
| 17.11.1.12 | 150.0 Sq.mm | | | | | | |
| 17.11.1.12.A | 1 core | Mtr. | 45.00 | 293.14 | 266.49 | 251.56 | 228.69 |
| 17.11.1.12.B | 2 core | Mtr. | 45.00 | 498.96 | 453.60 | 465.70 | 423.36 |
| 17.11.1.12.C | 3 core | Mtr. | 45.00 | 625.78 | 568.89 | 582.12 | 529.20 |

| Code No | Description | Unit | Rate excluding cost of cable | Comp Rate in Rs. | | | |
|--------------|---|------|------------------------------|------------------|--------------|----------------|----------------|
| | | | | Armoured | | Unarmoured | |
| | | | | Group-1 | Group-2 | Group-1 | Group-2 |
| 17.11.1.12.D | 3.5 core | Mtr. | 45.00 | 698.54 | 635.04 | 656.96 | 597.24 |
| 17.11.1.13 | 185.0 Sq.mm | | | | | | |
| 17.11.1.13.A | 1 core | Mtr. | 55.00 | 353.43 | 321.30 | 307.69 | 279.72 |
| 17.11.1.13.B | 2 core | Mtr. | 55.00 | 644.49 | 585.90 | 565.49 | 514.08 |
| 17.11.1.13.C | 3 core | Mtr. | 55.00 | 760.91 | 691.74 | 706.86 | 642.60 |
| 17.11.1.13.D | 3.5 core | Mtr. | 55.00 | 873.18 | 793.80 | 821.21 | 746.55 |
| 17.11.1.14 | 240.0 Sq.mm | | | | | | |
| 17.11.1.14.A | 1 core | Mtr. | 55.00 | 411.64 | 374.22 | 359.67 | 326.97 |
| 17.11.1.14.B | 2 core | Mtr. | 55.00 | 767.15 | 697.41 | 679.83 | 618.03 |
| 17.11.1.14.C | 3 core | Mtr. | 55.00 | 954.26 | 867.51 | 921.00 | 837.27 |
| 17.11.1.14.D | 3.5 core | Mtr. | 55.00 | 1083.16 | 984.69 | 1037.42 | 943.11 |
| 17.11.1.15 | 300.0 Sq.mm | | | | | | |
| 17.11.1.15.A | 1 core | Mtr. | 55.00 | 478.17 | 434.70 | 413.72 | 376.11 |
| 17.11.1.15.B | 2 core | Mtr. | 55.00 | 856.55 | 778.68 | 800.42 | 727.65 |
| 17.11.1.15.C | 3 core | Mtr. | 55.00 | 1135.13 | 1031.94 | 1085.24 | 986.58 |
| 17.11.1.15.D | 3.5 core | Mtr. | 55.00 | 1291.06 | 1173.69 | 1245.32 | 1132.11 |
| 17.11.1.16 | 400.0 Sq.mm | | | | | | |
| 17.11.1.16.A | 1 core | Mtr. | 55.00 | 561.33 | 510.30 | 496.88 | 451.71 |
| 17.11.1.16.B | 2 core | Mtr. | 55.00 | 1054.05 | 958.23 | 991.68 | 901.53 |
| 17.11.1.16.C | 3 core | Mtr. | 55.00 | 1390.85 | 1264.41 | 1349.27 | 1226.61 |
| 17.11.1.16.D | 3.5 core | Mtr. | 55.00 | 1594.59 | 1449.63 | 1540.54 | 1400.49 |
| 17.11.1.17 | 500.0 Sq.mm | | | | | | |
| 17.11.1.17.A | 1 core | Mtr. | 55.00 | 482.63 | 438.75 | 429.17 | 390.15 |
| 17.11.1.17.B | 2 core | Mtr. | 55.00 | 922.19 | 838.35 | 886.55 | 805.95 |
| 17.11.1.17.C | 3 core | Mtr. | 55.00 | 1266.71 | 1151.55 | 1180.58 | 1073.25 |
| 17.11.1.17.D | 3.5 core | Mtr. | 55.00 | 1434.51 | 1304.10 | 1392.93 | 1266.30 |
| 17.11.1.18 | 630.0 Sq.mm | | | | | | |
| 17.11.1.18.A | 1 core | Mtr. | 55.00 | 592.52 | 538.65 | 530.15 | 481.95 |
| 17.11.1.18.B | 2 core | Mtr. | 55.00 | 1231.07 | 1119.15 | 1101.87 | 1001.70 |
| 17.11.1.18.C | 3 core | Mtr. | 55.00 | 1572.62 | 1429.65 | 1565.19 | 1422.90 |
| 17.11.1.18.D | 3.5 core | Mtr. | 55.00 | 1790.91 | 1628.10 | 1747.85 | 1588.95 |
| 17.11.2 | Deduct if cable laid in existing RCC/Hume/Stoneware pipe. | Mtr. | | 30.00 | 30.00 | 30.00 | 30.00 |

| Code No | Description | Unit | Rate excluding cost of cable | Comp Rate in Rs. | | | |
|------------|--|------|------------------------------|------------------|---------|------------|---------|
| | | | | Armoured | | Unarmoured | |
| | | | | Group-1 | Group-2 | Group-1 | Group-2 |
| 17.11.3 | Deduct if cable laid on surface by means of screws,rag bolts,MSU clamps,as per approved spacing. | Mtr. | | 25.00 | 25.00 | 25.00 | 25.00 |
| 17.11.4 | Deduct if cable laid in open duct | Mtr. | | 35.00 | 35.00 | 35.00 | 35.00 |
| 17.11.5 | Add if trench excavation in C.C. flooring | Mtr. | | 10.00 | 10.00 | 10.00 | 10.00 |
| 17.11.6 | Add if trench excavation in Tar road | Mtr. | | 15.00 | 15.00 | 15.00 | 15.00 |
| | Control Cables | | | | | | |
| 17.11.7 | Providing and laying XLPE/PVC insulated & PVC sheathed control cables of 1.1 KV grade with copper conductor as per IS 1255 including excavationj of 30 CmX75 Cm size trench 25 Cm thick under layer of sand and lind class bricks covering | | | | | | |
| 17.11.7.1 | 2C x 2.5 sq.mm | Mtr | 40.00 | 97.00 | | 63.00 | |
| 17.11.7.2 | 3C x 2.5 sq.mm | Mtr | 40.00 | 122.00 | | 87.00 | |
| 17.11.7.3 | 4C x 2.5 sq.mm | Mtr | 40.00 | 149.00 | | 111.60 | |
| 17.11.7.4 | 5C x 2.5 sq.mm | Mtr | 40.00 | 179.00 | | 138.00 | |
| 17.11.7.5 | 7C x 2.5 sq.mm | Mtr | 40.00 | 231.00 | | 185.00 | |
| 17.11.7.6 | 9C x 2.5 sq.mm | Mtr | 55.00 | 289.00 | | 250.00 | |
| 17.11.7.7 | 12C x 2.5 sq.mm | Mtr | 55.00 | 366.00 | | 325.00 | |
| 17.11.7.8 | 14C x 2.5 sq.mm | Mtr | 55.00 | 420.00 | | 367.00 | |
| 17.11.7.9 | 19C x 2.5 sq.mm | Mtr | 55.00 | 554.00 | | 509.00 | |
| 17.11.7.10 | 2C x 1.5 sq.mm | Mtr | 40.00 | 73.00 | | 42.00 | |
| 17.11.7.11 | 3C x 1.5 sq.mm | Mtr | 40.00 | 88.00 | | 55.00 | |
| 17.11.7.12 | 4C x 1.5 sq.mm | Mtr | 40.00 | 105.00 | | 72.00 | |
| 17.11.7.13 | 5C x 1.5 sq.mm | Mtr | 40.00 | 127.00 | | 89.00 | |
| 17.11.7.14 | 7C x 1.5 sq.mm | Mtr | 40.00 | 158.00 | | 117.00 | |
| 17.11.7.15 | 9C x 1.5 sq.mm | Mtr | 40.00 | 211.00 | | 156.00 | |
| 17.11.7.16 | 12C x 1.5 sq.mm | Mtr | 55.00 | 238.00 | | 203.00 | |
| 17.11.7.17 | 14C x 1.5 sq.mm | Mtr | 55.00 | 273.00 | | 234.00 | |
| 17.11.7.18 | 19C x 1.5 sq.mm | Mtr | 55.00 | 357.00 | | 313.00 | |

17.12 LT CABLES TERMINATION ACCESSORIES

| Code No. | Description | Unit | Rate in Rs. | | | |
|------------|---|------|-------------|---------|-------------|------------|
| | | | Labour Rate | Al Lugs | Brass Gland | Compl Rate |
| 17.12.1 | Supplying and making one end termination with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size. | | | | | |
| 17.12.1.1 | 2 x 2.5 sq.mm | SET | 15.00 | 6.00 | 38.00 | 44.00 |
| 17.12.1.2 | 2 x 4.0 sq.mm | SET | 15.00 | 6.00 | 38.00 | 44.00 |
| 17.12.1.3 | 2 x 6.0 sq.mm | SET | 15.00 | 6.00 | 38.00 | 44.00 |
| 17.12.1.4 | 2 x 10.0 sq.mm | SET | 15.00 | 7.00 | 48.00 | 55.00 |
| 17.12.1.5 | 2 x 16.0 sq.mm | SET | 15.00 | 12.00 | 48.00 | 60.00 |
| 17.12.1.6 | 2 x 25.0 sq.mm | SET | 20.00 | 17.00 | 48.00 | 65.00 |
| 17.12.1.7 | 2 x 35.0 sq.mm | SET | 25.00 | 18.00 | 85.00 | 103.00 |
| 17.12.1.8 | 2 x 50.0 sq.mm | SET | 29.00 | 26.00 | 84.00 | 111.00 |
| 17.12.1.9 | 2 x 70 Sq. mm | SET | 32.00 | 34.00 | 87.00 | 122.00 |
| 17.12.1.10 | 3 x 2.5 sq.mm | SET | 16.00 | 10.00 | 38.00 | 48.00 |
| 17.12.1.11 | 3 x 4.0 sq.mm | SET | 16.00 | 10.00 | 38.00 | 48.00 |
| 17.12.1.12 | 3 x 6.0 sq.mm | SET | 16.00 | 10.00 | 48.00 | 59.00 |
| 17.12.1.13 | 3 x 10.0 sq.mm | SET | 16.00 | 10.00 | 48.00 | 59.00 |
| 17.12.1.14 | 3 x 16.0 sq.mm | SET | 19.00 | 17.00 | 48.00 | 65.00 |
| 17.12.1.15 | 3 x 25.0 sq.mm | SET | 25.00 | 25.00 | 47.00 | 72.00 |
| 17.12.1.16 | 3 x 35.0 sq.mm | SET | 30.00 | 29.00 | 84.00 | 113.00 |
| 17.12.1.17 | 3 x 50.0 sq.mm | SET | 36.00 | 40.00 | 83.00 | 123.00 |
| 17.12.1.18 | 3 x 70.0 sq.mm | SET | 36.00 | 40.00 | 83.00 | 123.00 |
| 17.12.1.19 | 3 x 95.0 sq.mm | SET | 50.00 | 62.00 | 125.00 | 187.00 |
| 17.12.1.20 | 3 x 120.0 sq.mm | SET | 64.00 | 86.00 | 210.00 | 295.00 |
| 17.12.1.21 | 3 x 150.0 sq.mm | SET | 70.00 | 104.00 | 209.00 | 313.00 |
| 17.12.1.22 | 3 x 185.0 sq.mm | SET | 85.00 | 131.00 | 207.00 | 315.00 |
| 17.12.1.23 | 3 x 240.0 sq.mm | SET | 110.00 | 198.00 | 243.00 | 441.00 |
| 17.12.1.24 | 3 x 300.0 sq.mm | SET | 125.00 | 259.00 | 241.00 | 500.00 |

| Code No. | Description | Unit | Rate in Rs. | | | |
|------------|--|------|-------------|---------|-------------|------------|
| | | | Labour Rate | Al Lugs | Brass Gland | Compl Rate |
| 17.12.1.25 | 3.5 x 25.0 sq.mm | SET | 35.00 | 31.00 | 83.00 | 114.00 |
| 17.12.1.26 | 3.5 x 35.0 sq.mm | SET | 35.00 | 36.00 | 83.00 | 119.00 |
| 17.12.1.27 | 3.5 x 50.0 sq.mm | SET | 43.00 | 49.00 | 82.00 | 132.00 |
| 17.12.1.28 | 3.5 x 70.0 sq.mm | SET | 48.00 | 61.00 | 125.00 | 186.00 |
| 17.12.1.29 | 3.5 x 95.0 sq.mm | SET | 62.00 | 76.00 | 210.00 | 286.00 |
| 17.12.1.30 | 3.5 x 120.0 sq.mm | SET | 77.00 | 102.00 | 208.00 | 310.00 |
| 17.12.1.31 | 3.5 x 150.0 sq.mm | SET | 85.00 | 121.00 | 207.00 | 328.00 |
| 17.12.1.32 | 3.5 x 185.0 sq.mm | SET | 135.00 | 155.00 | 240.00 | 395.00 |
| 17.12.1.33 | 3.5 x 240.0 sq.mm | SET | 135.00 | 228.00 | 240.00 | 467.00 |
| 17.12.1.34 | 3.5 x 300.0 sq.mm | SET | 170.00 | 293.00 | 320.00 | 613.00 |
| 17.12.1.35 | 3.5 x 400.0 sq.mm | SET | 210.00 | 397.00 | 382.00 | 779.00 |
| 17.12.1.36 | 3.5 x 500.0 sq.mm | SET | 240.00 | 532.00 | 493.00 | 1025.00 |
| 17.12.1.37 | 3.5 x 630.0 sq.mm | SET | 280.00 | 667.00 | 608.00 | 1275.00 |
| 17.12.1.38 | 4 x 2.5 sq.mm | SET | 20.00 | 15.00 | 37.00 | 52.00 |
| 17.12.1.39 | 4 x 4.0 sq.mm | SET | 20.00 | 15.00 | 37.00 | 52.00 |
| 17.12.1.40 | 4 x 6.0 sq.mm | SET | 20.00 | 15.00 | 48.00 | 63.00 |
| 17.12.1.41 | 4 x 10.0 sq.mm | SET | 20.00 | 15.00 | 48.00 | 63.00 |
| 17.12.1.42 | 4 x 16.0 sq.mm | SET | 27.00 | 23.00 | 84.00 | 108.00 |
| 17.12.1.43 | 4 x 25.0 sq.mm | SET | 27.00 | 34.00 | 84.00 | 119.00 |
| 17.12.1.44 | 4 x 35.0 sq.mm | SET | 35.00 | 37.00 | 83.00 | 120.00 |
| 17.12.1.45 | 4 x 50.0 sq.mm | SET | 43.00 | 55.00 | 82.00 | 137.00 |
| 17.12.1.46 | 1 x 300 | SET | 75.00 | 86.00 | 86.00 | 173.00 |
| 17.12.1.47 | 1 x 400 | SET | 75.00 | 115.00 | 110.00 | 224.00 |
| 17.12.1.48 | 1 x 500 | SET | 80.00 | 155.00 | 138.00 | 293.00 |
| 17.12.1.49 | 1 x 630 | SET | 85.00 | 190.00 | 171.00 | 361.00 |
| 17.12.2 | Supply, Fabricating & installing following sizes of perforated M.S. cable trays including horizontal and vertical bends, reducers tees, cross members and other accessories as required and duly suspended from the ceiling with M.S. suspenders and including painting as required. | | | | | |
| 17.12.2.1 | 100mm x 50mm x 1.6mm | Mtr. | 20.00 | | | 244.00 |

| Code No. | Description | Unit | Rate in Rs. | | | |
|------------|---|------|-------------|---------|-------------|------------|
| | | | Labour Rate | Al Lugs | Brass Gland | Compl Rate |
| 17.12.2.2 | 150mm x 50mm x 1.6mm | Mtr. | 25.00 | | | 301.00 |
| 17.12.2.3 | 225mm x 50mm x 1.6mm | Mtr. | 35.00 | | | 386.00 |
| 17.12.2.4 | 300mm x 50mm x 1.6mm | Mtr. | 40.00 | | | 471.00 |
| 17.12.2.5 | 375mm x 50mm x 2.0mm | Mtr. | 50.00 | | | 590.00 |
| 17.12.2.6 | 450mm x 50mm x 2.0mm | Mtr. | 60.00 | | | 687.00 |
| 17.12.2.7 | 600mm x 50mm x 2.0mm | Mtr. | 75.00 | | | 868.00 |
| 17.12.2.8 | 300mm x 62.5mm x 2.0mm | Mtr. | 45.00 | | | 534.00 |
| 17.12.2.9 | 375mm x 62.5mm x 2.0mm | Mtr. | 55.00 | | | 624.00 |
| 17.12.2.10 | 450mm x 62.5mm x 2.0mm | Mtr. | 65.00 | | | 715.00 |
| 17.12.2.11 | 600mm x 62.5mm x 2.0mm | Mtr. | 80.00 | | | 896.00 |
| 17.12.2.12 | 750mm x 62.5mm x 2.0mm | Mtr. | 90.00 | | | 1056.00 |
| 17.12.2.13 | 900mm x 62.5mm x 2.0mm | Mtr. | 110.00 | | | 1260.00 |
| 17.12.2.14 | 600mm x 75mm x 2.0mm | Mtr. | 80.00 | | | 925.00 |
| 17.12.2.15 | 750mm x 75mm x 2.0mm | Mtr. | 95.00 | | | 1084.00 |
| 17.12.2.16 | 900mm x 75mm x 2.0mm | Mtr. | 115.00 | | | 1282.00 |
| 17.12.3 | Supply, Fabricating & installing following sizes of ladder type M.S. cable trays with rungs at span of 250mm including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling/wall with M.S. suspenders and including painting as required. | | | | | |
| 17.12.3.1 | 100mm x 50mm x 1.6mm | Mtr. | 20.00 | | | 135.00 |
| 17.12.3.2 | 150mm x 50mm x 1.6mm | Mtr. | 25.00 | | | 180.00 |
| 17.12.3.3 | 225mm x 50mm x 1.6mm | Mtr. | 35.00 | | | 229.00 |
| 17.12.3.4 | 300mm x 50mm x 1.6mm | Mtr. | 40.00 | | | 282.00 |
| 17.12.3.5 | 375mm x 50mm x 2.0mm | Mtr. | 50.00 | | | 338.00 |
| 17.12.3.6 | 450mm x 50mm x 2.0mm | Mtr. | 60.00 | | | 405.00 |
| 17.12.3.7 | 600mm x 50mm x 2.0mm | Mtr. | 75.00 | | | 518.00 |
| 17.12.3.8 | 300mm x 62.5mm x 2.0mm | Mtr. | 45.00 | | | 315.00 |
| 17.12.3.9 | 375mm x 62.5mm x 2.0mm | Mtr. | 55.00 | | | 371.00 |
| 17.12.3.10 | 450mm x 62.5mm x 2.0mm | Mtr. | 65.00 | | | 462.00 |
| 17.12.3.11 | 600mm x 62.5mm x 2.0mm | Mtr. | 80.00 | | | 534.00 |

| Code No. | Description | Unit | Rate in Rs. | | | |
|------------|---|------|---------------|---------|-------------|------------|
| | | | Labour Rate | Al Lugs | Brass Gland | Compl Rate |
| 17.12.3.12 | 750mm x 62.5mm x 2.0mm | Mtr. | 90.00 | | | 676.00 |
| 17.12.3.13 | 900mm x 62.5mm x 2.0mm | Mtr. | 110.00 | | | 766.00 |
| 17.12.3.14 | 600mm x 75mm x 2.0mm | Mtr. | 80.00 | | | 540.00 |
| 17.12.3.15 | 750mm x 75mm x 2.0mm | Mtr. | 95.00 | | | 641.00 |
| 17.12.3.16 | 900mm x 75mm x 2.0mm | Mtr. | 115.00 | | | 759.00 |
| 17.12.4 | S & Making outdoor straight through joint for following size of PVC/ XLPE insulated aluminium conductor cable of 1.1 KV grade including cost of compound, sleeves etc. as required. | | | | | |
| 17.12.4.1 | 2 x 2.5 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.2 | 2 x 4.0 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.3 | 2 x 6.0 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.4 | 2 x 10.0 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.5 | 2 x 16.0 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.6 | 2 x 25.0 sq.mm | SET | 60.00 | | | 319.00 |
| 17.12.4.7 | 2 x 35.0 sq.mm | SET | 75.00 | | | 316.00 |
| 17.12.4.8 | 2 x 50.0 sq.mm | SET | 75.00 | | | 391.00 |
| 17.12.4.9 | 2 x 70.0 sq.mm | SET | 75.00 | | | 408.00 |
| 17.12.4.10 | 3 x 2.5 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.11 | 3 x 4.0 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.12 | 3 x 6.0 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.13 | 3 x 10.0 sq.mm | SET | 60.00 | | | 221.00 |
| 17.12.4.14 | 3 x 16.0 sq.mm | SET | 60.00 | | | 290.00 |
| 17.12.4.15 | 3 x 25.0 sq.mm | SET | 60.00 | | | 324.00 |
| 17.12.4.16 | 3 x 35.0 sq.mm | SET | 75.00 | | | 322.00 |
| 17.12.4.17 | 3 x 50.0 sq.mm | SET | 75.00 | | | 403.00 |
| 17.12.4.18 | 3 x 70.0 sq.mm | SET | 75.00 | | | 420.00 |
| 17.12.4.19 | 3 x 95.0 sq.mm | SET | 100.00 | | | 491.00 |
| 17.12.4.20 | 3 x 120.0 sq.mm | SET | 100.00 | | | 514.00 |
| 17.12.4.21 | 3 x 150.0 sq.mm | SET | 100.00 | | | 629.00 |
| 17.12.4.22 | 3 x 185.0 sq.mm | SET | 100.00 | | | 664.00 |
| 17.12.4.23 | 3 x 240.0 sq.mm | SET | 100.00 | | | 836.00 |

| Code No. | Description | Unit | Rate in Rs. | | | |
|-------------------|---|------------|---------------|---------|-------------|----------------|
| | | | Labour Rate | Al Lugs | Brass Gland | Compl Rate |
| 17.12.4.24 | 3 x 300.0 sq.mm | SET | 100.00 | | | 865.00 |
| 17.12.4.25 | 3.5 x 25.0 sq.mm | SET | 80.00 | | | 327.00 |
| 17.12.4.26 | 3.5 x 35.0 sq.mm | SET | 80.00 | | | 327.00 |
| 17.12.4.27 | 3.5 x 50.0 sq.mm | SET | 80.00 | | | 414.00 |
| 17.12.4.28 | 3.5 x 70.0 sq.mm | SET | 80.00 | | | 431.00 |
| 17.12.4.29 | 3.5 x 95.0 sq.mm | SET | 100.00 | | | 502.00 |
| 17.12.4.30 | 3.5 x 120.0 sq.mm | SET | 100.00 | | | 526.00 |
| 17.12.4.31 | 3.5 x 150.0 sq.mm | SET | 100.00 | | | 640.00 |
| 17.12.4.32 | 3.5 x 185.0 sq.mm | SET | 100.00 | | | 675.00 |
| 17.12.4.33 | 3.5 x 240.0 sq.mm | SET | 100.00 | | | 853.00 |
| 17.12.4.34 | 3.5 x 300.0 sq.mm | SET | 100.00 | | | 888.00 |
| 17.12.4.35 | 3.5 x 400.0 sq.mm | SET | 150.00 | | | 1012.00 |
| 17.12.4.36 | 3.5 x 500.0 sq.mm | SET | 150.00 | | | 1070.00 |
| 17.12.4.37 | 3.5 x 630.0 sq.mm | SET | 150.00 | | | 1242.00 |
| 17.12.4.38 | 4 x 2.5 sq.mm | SET | 60.00 | | | 232.00 |
| 17.12.4.39 | 4 x 4.0 sq.mm | SET | 60.00 | | | 232.00 |
| 17.12.4.40 | 4 x 6.0 sq.mm | SET | 60.00 | | | 232.00 |
| 17.12.4.41 | 4 x 10.0 sq.mm | SET | 60.00 | | | 232.00 |
| 17.12.4.42 | 4 x 16.0 sq.mm | SET | 60.00 | | | 302.00 |
| 17.12.4.43 | 4 x 25.0 sq.mm | SET | 60.00 | | | 336.00 |
| 17.12.4.44 | 4 x 35.0 sq.mm | SET | 60.00 | | | 336.00 |
| 17.12.4.45 | 4 x 50.0 sq.mm | SET | 60.00 | | | 428.00 |
| 17.12.5 | S/F cable route marker with 10cm x 10cm x 5mm thick or of 10cm dia. G.I.plate with inscription thereon, bolted/welded to 35mm x 35mm x 6mm angle iron,60cm long and fixing the same in ground as required | EACH | 10.00 | | | 79.00 |

17.13 HT CABLES AND JOINTS

| Code No | Description | Unit | Rate in Rs. | | | |
|-----------|---|------|---------------|----------------|----------------|--------------------------|
| | | | Labour Rate | Compl | Indoor | Outdoor straight Through |
| 17.13.1 | P & Laying XLPE insulated IS:7098/II/85 of Group1 and approved make H.T.cable for working voltage 11 K.V.Earthed direct in ground including excavation of 30cmx100cm size trench, 25cm layer of river sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size. | | | | | |
| 17.13.1.1 | 3 core 35.0 Sq.mm | Mtr. | 90.00 | 780.00 | | |
| 17.13.1.2 | 3 core 50.0 Sq.mm | Mtr. | 90.00 | 885.00 | | |
| 17.13.1.3 | 3 core 70.0 Sq.mm | Mtr. | 90.00 | 960.00 | | |
| 17.13.1.4 | 3 core 95.0 Sq.mm | Mtr. | 90.00 | 1125.00 | | |
| 17.13.1.5 | 3 core 120.0 Sq.mm | Mtr. | 90.00 | 1260.00 | | |
| 17.13.1.6 | 3 core 150.0 Sq.mm | Mtr. | 97.50 | 1387.50 | | |
| 17.13.1.7 | 3 core 185.0 Sq.mm | Mtr. | 97.50 | 1575.00 | | |
| 17.13.1.8 | 3 core 240.0 Sq.mm | Mtr. | 97.50 | 1845.00 | | |
| 17.13.1.9 | 3 core 300.0 Sq.mm | Mtr. | 150.00 | 2100.00 | | |
| 17.13.2 | Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of Group1 and approved make suitable for XLPE insulated 11 KV cable, with required components, prepration of cable ends,testing etc. as required of following sizes . | | | | | |
| 17.13.2.1 | 3 core 35/50 Sq.mm | EACH | 750.00 | 4450.00 | 7400.00 | 12300.00 |
| 17.13.2.2 | 3 core 70/95 Sq.mm | EACH | 750.00 | 4700.00 | 7800.00 | 13750.00 |
| 17.13.2.3 | 3 core 120/150/185/225 Sq.mm | EACH | 950.00 | 5200.00 | 8400.00 | 17800.00 |
| 17.13.2.4 | 3 core 240/300 Sq.mm | EACH | 950.00 | 5600.00 | 8800.00 | 19000.00 |
| 17.13.3 | Providing and laying under ground cable IS:7098 Part-II as per JVVNL specifications enclosed and of approved make suitable for working voltage upto and including 33 KV in aluminium conductors XLPE armoured category-I including excavation of 30cm x 150cm size trench as per IS:1255, 24cm thick under layer, refill earth in the remaining portion, making necessary connections including testing etc. as required of size given below : 3 Core x 300 Sqmm approved make | Rmt | 150.00 | 2600.00 | | |

| Code No | Description | Unit | Rate in Rs. | | | straight Through |
|-----------|---|------|-------------|-------|-----------------|------------------|
| | | | Labour Rate | Compl | Indoor Outdoor | |
| 17.13.4 | Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of Group1 and approved make suitable for XLPE insulated 33 KV cable, with required components, preparation of cable ends,testing etc. as required of following sizes . | | | | | |
| 17.13.4.1 | 3 core 300 Sq.mm | EACH | 1150.00 | | 5800.00 9200.00 | 19000.00 |
| 17.13.5 | Providing & making push-on type indoor/ outdoor/ straight through terminations/ joint kit of Group1 and approved make suitable for XLPE insulated 11 KV cable, with required components, preparation of cable ends,testing etc. as required of following sizes . | | | | | |
| 17.13.5.1 | 3 core 35/50 Sq.mm | EACH | 700.00 | | 4200.00 7200.00 | |
| 17.13.5.2 | 3 core 70/95 Sq.mm | EACH | 700.00 | | 4500.00 7500.00 | |
| 17.13.5.3 | 3 core 120/150/185/225 Sq.mm | EACH | 900.00 | | 5000.00 8100.00 | |
| 17.13.5.4 | 3 core 240/300 Sq.mm | EACH | 900.00 | | 5450.00 8500.00 | |

Note 1 Deduct or Add for mode of cable laying as per Chapter 11 (From item 11.2 to .11.6.)

Note 2 Deduct 10% from the rate of HT cables, indoor/ outdoor/ terminations/ joint of Group1 for rates of Group2

17.14 BUS BAR CHAMBERS

| Code No | Description | Unit | Rate in Rs. | |
|-----------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.14.1 | P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 100 amp. Capacity housed in sheet metal box made out from 1.2 mm MS sheet front openable , bus bar fixed on porcelain insulators at approved spacing including making connections etc. as required | | | |
| 17.14.1.1 | 300 mm long , 2 strip | Each | 25.00 | 353.00 |
| 17.14.1.2 | 300 mm long , 4 strip | Each | 30.00 | 484.00 |
| 17.14.1.3 | 450 mm long , 2 strip | Each | 30.00 | 513.00 |
| 17.14.1.4 | 450 mm long , 4 strip | Each | 35.00 | 725.00 |
| 17.14.1.5 | 600 mm long ,2 strip | Each | 40.00 | 684.00 |
| 17.14.1.6 | 600 mm long , 4 strip | Each | 45.00 | 942.00 |
| 17.14.1.7 | 900 mm long , 2 strip | Each | 50.00 | 1028.00 |
| 17.14.1.8 | 900 mm long , 4 strip | Each | 55.00 | 1372.00 |
| 17.14.2 | P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 200 amp. Capacity housed in sheet metal box made out from 1.2 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required | | | |
| 17.14.2.1 | 300 mm long , 4 strip | Each | 30.00 | 634.00 |
| 17.14.2.2 | 450 mm long , 4 strip | Each | 35.00 | 915.00 |
| 17.14.2.3 | 600 mm long , 4 strip | Each | 45.00 | 1235.00 |
| 17.14.2.4 | 900 mm long , 4 strip | Each | 55.00 | 1832.00 |
| 17.14.2.5 | 1200 mm long , 4 strip | Each | 60.00 | 2274.00 |
| 17.14.2.6 | 1500 mm long , 4 strip | Each | 70.00 | 2945.00 |
| 17.14.3 | P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 300 amp. Capacity housed in sheet metal box made out from 1.2 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required | | | |
| 17.14.3.1 | 450 mm long, 4 strip | Each | 40.00 | 1018.00 |
| 17.14.3.2 | 600 mm long, 4 strip | Each | 50.00 | 1488.00 |
| 17.14.3.3 | 900 mm long, 4 strip | Each | 60.00 | 2118.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-----------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.14.3.4 | 1200 mm long, 4 strip | Each | 65.00 | 3900.00 |
| 17.14.3.5 | 1500 mm long, 4 strip | Each | 75.00 | 3611.00 |
| 17.14.4 | P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 400 amp. Capacity housed in sheet metal box made out from 1.2 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required | | | |
| 17.14.4.1 | 600 mm long, 4 strip | Each | 55.00 | 2062.00 |
| 17.14.4.2 | 900 mm long, 4 strip | Each | 65.00 | 3038.00 |
| 17.14.4.3 | 1200 mm long, 4 strip | Each | 70.00 | 3900.00 |
| 17.14.4.4 | 1500 mm long, 4 strip | Each | 80.00 | 4818.00 |
| 17.14.5 | P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 500 amp. Capacity housed in sheet metal box made out from 1.2 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required | | | |
| 17.14.5.1 | 900 mm long, 4 strip | Each | 70.00 | 3440.00 |
| 17.14.5.2 | 1200 mm long, 4 strip | Each | 75.00 | 4589.00 |
| 17.14.5.3 | 1500 mm long, 4 strip | Each | 85.00 | 5795.00 |
| 17.14.6 | P&F following size aluminium bus bar on insulators at approved spacing in existing bus bar chamber including making holes etc. as required | | | |
| 17.14.6.1 | 20 x 5 mm | Mtr. | 15.00 | 147.00 |
| 17.14.6.2 | 30 x 5 mm | Mtr. | 20.00 | 210.00 |
| 17.14.6.3 | 50 x 5 mm | Mtr. | 25.00 | 284.00 |
| 17.14.6.4 | 50 x 6 mm | Mtr. | 30.00 | 318.00 |
| 17.14.7 | P&F following size copper bus bar on insulators at approved spacing in existing panel/bus bar chamber including making holes etc. as required | | | |
| 17.14.7.1 | 20 x 3 mm | Mtr. | 15.00 | 205.00 |
| 17.14.7.2 | 25 x 5 mm | Mtr. | 20.00 | 342.00 |
| 17.14.7.3 | 40 x 5 mm | Mtr. | 25.00 | 496.00 |
| 17.14.7.4 | 50 x 5 mm | Mtr. | 30.00 | 599.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-----------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.14.8 | S.I.T.C. of bus trunking arrangement in convenient sections complete with housing of galvanized sheet steel of minimum 1.5 mm thickness, aluminium bus bar for use on 3 phase, 4 wire, 415 volts, A.C. supply with degree of protection IP-42 for the following current carrying capacity, including jointing of sections, flexible joints. expansion joints, bends, and earthing with 2 runs of alum. strips etc. as required. | | | |
| 17.14.8.1 | 800 amps. | Mtr. | 350.00 | 9148.00 |
| 17.14.8.2 | 1000 amps. | Mtr. | 350.00 | 10649.00 |
| 17.14.8.3 | 1250 amps | Mtr. | 400.00 | 12820.00 |
| 17.14.8.4 | 1400 amps | Mtr. | 400.00 | 14545.00 |
| 17.14.8.5 | 1600 amps | Mtr. | 500.00 | 16140.00 |
| 17.14.8.6 | 2000 amps | Mtr. | 500.00 | 17692.00 |
| 17.14.8.7 | 2500 amps | Mtr. | 500.00 | 19245.00 |

NOTE Add 35% on rates of aluminium bus bar for copper bus bar of Havells, Millborn Mack

17.15 EARTHING

| Code No | Description | Unit | Rate in Rs. | |
|-----------|---|------|-------------|----------------|
| | | | Labour Rate | Complete Rate |
| 17.15.1 | Pipe Earthing as per IS:3043 with perforated 3.0 Mtr. Long, 40 mm dia. ' B ' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance as required. | EACH | 250.00 | 1125.00 |
| 17.15.2 | Plate Earthing as per IS:3043 with G.I. Earth plate of size 600mm x 600mm x 6.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer ,nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required. | EACH | 350.00 | 1350.00 |
| 17.15.3 | Plate Earthing as per IS:3043 with copper Earth plate of size 600mm x 600mm x 3.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple ,wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required. | EACH | 350.00 | 4725.00 |
| 17.15.4 | S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required. | | | |
| 17.15.4.1 | 6 SWG copper Wire | Mtr. | 3.00 | 55.50 |
| 17.15.4.2 | 8 SWG copper Wire | Mtr. | 3.00 | 39.70 |
| 17.15.4.3 | 10 SWG copper. Wire | Mtr. | 3.00 | 25.70 |
| 17.15.4.4 | 6 SWG G.I. Wire | Mtr. | 3.00 | 9.25 |
| 17.15.4.5 | 8 SWG G.I. Wire | Mtr. | 3.00 | 6.75 |
| 17.15.4.6 | 10 SWG G.I. Wire | Mtr. | 3.00 | 4.50 |
| 17.15.4.7 | 20mm x 3mm copper strip | Mtr. | 9.00 | 185.70 |
| 17.15.4.8 | 25mm x 3mm copper strip | Mtr. | 15.00 | 230.50 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|---|------|--------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.15.4.9 | 25mm x 5mm copper strip | | 12.00 | 376.00 |
| 17.15.4.10 | 32mm x 6mm copper strip | Mtr. | 13.00 | 576.50 |
| 17.15.4.11 | 50mm x 6mm copper strip | Mtr. | 30.00 | 893.50 |
| 17.15.4.12 | 20mm x 3mm G.I. Strip | | 9.00 | 29.00 |
| 17.15.4.13 | 25mm x 3mm G.I. Strip | Mtr. | 10.00 | 35.00 |
| 17.15.4.14 | 25mm x 6mm G.I. Strip | | 12.00 | 63.25 |
| 17.15.4.15 | 32mm x6mm G.I. Strip | Mtr. | 20.00 | 76.75 |
| 17.15.4.16 | 50mm x 6mm G.I. Strip | Mtr. | 30.00 | 113.75 |
| 17.15.4.17 | 25mm x 3mm Alum. Strip | Mtr. | 10.00 | 52.50 |
| 17.15.4.18 | 25mm x 6mm Alum. Strip | Mtr. | 15.00 | 97.00 |
| 17.15.4.19 | 32mm x 6mm Alum. Strip | Mtr. | 20.00 | 121.75 |
| 17.15.4.20 | 50mm x 6mm Alum. Strip | Mtr. | 25.00 | 183.75 |
| 17.15.4.21 | 2.24 mm dia. Bare alum. Conductor | Mtr. | 1.00 | 2.25 |
| 17.15.4.22 | 14 SWG copper wire | Mtr. | 1.00 | 9.70 |
| 17.15.4.23 | 12 SWG copper wire | Mtr. | 2.00 | 17.70 |
| 17.15.5 | S & Laying following size' A' class G.I. Pipe with accessories for laying earth conductor/strip in ground/surface/recess as required | Mtr. | | |
| 17.15.5.1 | 15 mm dia. | Mtr. | 8.00 | 51.75 |
| 17.15.5.2 | 20 mm dia. | Mtr. | 10.00 | 73.75 |
| 17.15.5.3 | 25 mm dia. | Mtr. | 12.00 | 101.25 |
| 17.15.5.4 | 32mm dia | Mtr. | 15.00 | 128.25 |
| 17.15.5.5 | 40 mm dia. | Mtr. | 20.00 | 160.75 |
| 17.15.5.6 | 50 mm dia. | Mtr. | 25.00 | 202.00 |
| 17.15.6 | Mesh earthing as per IS:3043 with copper earth strip of size 20 mm x 3 mm to form a mesh of size 3000 mm x 1000 mm in horizontal formation to create equal sections of 500 mm x 500 mm by means of 10 mm brass bolts, & nuts with spring washer, embodying 1 mtr. Below the ground level, refilling the pit by alternative layers of charcoal & salt up to 500 mm with 20 mm dia, 20mm GI 'B' class watering pipe and 12 mm G I 'B' class pipe for the earth wire including all accessories like nuts, bolts, wire mesh funnel and brick masonry finished chamber covered with hinged CI cover and locking arrangement of size 300 mm x 300 mm complete in all respect. | Each | 350.00 | 3050.00 |

| Code No | Description | Unit | Rate in Rs. | |
|----------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.15.7 | Mesh earthing as per IS:3043 with GI earth strip of size 25 mm x 6 mm to form a mesh of size 3000 mm x 1000 mm in horizontal formation to create equal sections of 500 mm x 500 mm by means of 10 mm brass bolts, & nuts with spring washer, embodying 1 mtr. below the ground level, refilling the pit by alternative layers of charcoal & salt up to 500 mm with 20 mm dia, 20mm GI 'B' class watering pipe and 12 mm G I 'B' class pipe for the earth wire including all accessories like nuts, bolts, wire mesh funnel and brick masonry finished chamber covered with hinged CI cover and locking arrangement of size 300 mm x 300 mm complete in all respect. | Each | 350.00 | 1800.00 |
| 17.15.8 | P & F lightning conductor finial made out of 25 mm dia.,300 mm long copper tube having single prong at top with 85 mm dia., 3 mm thick copper base plate including holes etc. complete as required. | EACH | 50.00 | 581.00 |
| 17.15.9 | P & F lightning conductor finial made out of 25 mm dia.,300 mm long G.I. tube having single prong at top with 85 mm dia., 3 m thick G.I. base plate including holes etc. complete as required. | EACH | 50.00 | 294.00 |
| 17.15.10 | Rivetting, sweating and soldering of copper /G.I. Tape with another copper /G.I. Tape, base of the finial or any other metallic objects as required. | EACH | 20.00 | 51.00 |
| 17.15.11 | P & F copper tape 20mm x 3 mm on parapet or surface of wall in vertical/horizontal run as required. | Mtr. | 8.00 | 129.00 |
| 17.15.12 | P & F G.I. tape 20mm x 3 mm on parapet or surface of wall in vertical/horizontal run as required. | Mtr. | 8.00 | 23.00 |
| 17.15.13 | P & F testing joint, made out of 20mm x 3mm copper Strip, 125 mm long, with 4 no. tinned brass bolts, nuts, checknuts, spring washer etc. complete as required. | EACH | 20.00 | 101.00 |
| 17.15.14 | P & F testing joint, made out of 20mm x 3mm G.I. Strip, 125 mm long, with 4 no.G.I. bolts, nuts, checknuts, spring washer etc. complete as required. | EACH | 20.00 | 39.00 |

17.16 CEILING ,FRESH AIR, EXHAUST & VENTILATION FANS ,AIR CIRCULATOR

| Code No | Description | Unit | Rate in Rs. | |
|-----------|---|------|--------------|-----------------|
| | | | Labour Rate | Group-1 Group-2 |
| 17.16.1 | Making of hole in wall of required size for housing exhaust fan and making good the same, with cement plaster as required of following size: | | | |
| 17.16.1.1 | Up to 457 mm size | Each | 100.00 | 130.00 |
| 17.16.1.2 | more than 457 mm & up to 610 mm | Each | 115.00 | 160.00 |
| 17.16.2 | Fixing of fresh air fan/exhaust fan up to size of 300 mm on ply/ poly board of 6.0 mm in existing window frame including cutting of hole in ply. Nut bolts etc. as required. | Each | | 90.00 |
| 17.16.3 | I T C of ceiling fan and regulator including wiring the down rod up to 30 cm with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. | | | |
| 17.16.3.1 | With regulator | Each | 20.00 | 28.00 |
| 17.16.3.2 | Without regulator | Each | 15.00 | 21.00 |
| 17.16.4 | P & F double ball bearing capacitor start ceiling fan of approved make complete with regulator and other accessories as required. (for estimation purpose only) | | | |
| 17.16.4.1 | 900 mm sweep | Each | 27.00 | 1146.00 |
| 17.16.4.2 | 1050 mm sweep | Each | 27.00 | 1175.00 |
| 17.16.4.3 | 1200 mm sweep | Each | 27.00 | 1203.00 |
| 17.16.4.4 | 1400 mm sweep | Each | 27.00 | 1290.00 |
| 17.16.5 | P & F 1.6 mm thick M.S. Recessed fan box, hexagonal/ round of size 100 mm dia, depth 75mm, 12 mm dia rod fan hook with 100 mm length extended on each side . | Each | 5.00 | 51.00 |
| 17.16.6 | P & F of iron hook/clamp 40 mm x 5 mm M.S. flat complete with nut & bolt etc. as required. | Each | 5.00 | 28.00 |
| 17.16.7 | P & F of M.S. J- hook of standard design made out of 16 mm dia. M.S. round bar and fixed with cement concrete mortar with required support as required. | Each | 75.00 | 104.00 |
| 17.16.8 | P&F of capacitor start single phase metallic blade fresh air fan, in existing opening including cost of hardware , flexible copper conductor ,making connections, testing etc. as required. | | | |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|--------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.16.8.1 | 225 mm sweep | Each | 25.00 | 1146.00 | 1031.00 |
| 17.16.8.2 | 300 mm sweep | Each | 25.00 | 1261.00 | 1146.00 |
| 17.16.9 | P&F of Heavy duty capacitor start 900/1400 RPM single phase ISI marked Exhaust fan,IS:2312 marked in existing opening including making connections testing etc. as required. | | | | |
| 17.16.9.1 | 300 mm sweep(900/1400 RPM) | Each | 60.00 | 2234.00 | 1831.00 |
| 17.16.9.2 | 380 mm sweep(900/1400 RPM) | Each | 60.00 | 2636.00 | 2291.00 |
| 17.16.9.3 | 450 mm sweep(900 RPM) | Each | 70.00 | 3152.00 | 2864.00 |
| 17.16.9.4 | 600 mm sweep(700 RPM) | Each | 70.00 | 6660.00 | 6314.00 |
| 17.16.10 | P & F of ventilating fans, Capacitor start, single phase with PVC impeller, ABS body, automatic openable louver shutter in existing opening including making connection, testing etc. as required. | | | | |
| 17.16.10.1 | 200 mm sweep | Each | 40.00 | 1259.00 | 1144.00 |
| 17.16.10.2 | 250 mm sweep | Each | 40.00 | 1374.00 | 1259.00 |
| 17.16.11 | P & F heavy duty, Double ball bearing and with sturdy mesh guard; Aluminium alloy one piece blade wall mounting oscillating type air circulator conforming to IS:2997, including fixing with anchor bolts, regulator making connection testing etc. as required | | | | |
| 17.16.11.1 | 450 mm sweep With three speed regulator | Each | 80.00 | 5353.00 | 4703.00 |
| 17.16.11.2 | 600 mm sweep With three speed regulator | Each | 80.00 | 7578.00 | 6658.00 |
| 17.16.11.3 | 750 mm sweep With three speed regulator | Each | 80.00 | 8958.00 | 7808.00 |
| 17.16.12 | P & F of capacitor start, three speed wall mounting/cabin fan of following sweep with the help of anchor bolts including making connection testing etc. as required. | | | | |
| 17.16.12.1 | 400 mm sweep(Oscillating type) | Each | 40.00 | 1978.00 | 1650.00 |
| 17.16.12.2 | 300 mm sweep(Non oscillating type) | Each | 40.00 | 1719.00 | 1374.00 |
| 17.16.13 | P & F capacitor start, three speed, oscillating type pedestal fan with adjustable height, of following size with cord and plug top as required. | | | | |
| 17.16.13.1 | 400 mm sweep | Each | | 2242.00 | 1955.00 |
| 17.16.13.2 | 450 mm sweep | Each | | 3508.00 | 3220.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|------|-------------|-----------------|
| | | | Labour Rate | Group-1 Group-2 |
| 17.16.14 | P & F extra down rod of 12mm dia, B class GI pipe including cutting, threading, drilling, fixing quarter pin etc as reqd. | Mtr. | 10.00 | 79.00 |
| 17.16.15 | Numbering of ceiling fans/ fixtures with approved enamel paint etc as reqd | Each | | 6.00 |
| 17.16.16 | P&F of Resistance type regulator of approved make including cutting of sheet, nut bolts, making connections etc as reqd. | Each | 5.00 | 51.00 |
| 17.16.17 | P&F of Gravity Louver shutter of superior quality made out of M.S. sheet with enamel paint including cost of nuts, bolts, etc as reqd. | | | |
| 17.16.17.1 | Up to 380 mm size | Each | 10.00 | 56.00 |
| 17.16.17.2 | above 380 mm size | Each | 10.00 | 79.00 |

17.17 STORAGE WATER HEATER

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|--|------|---------------|----------------|----------------|
| | | | Labour Rate | Group1 | Group 2 |
| 17.17.1 | P & F ISI marked (IS:2082) vertical storage water heater with outer casing made of M.S.sheet finished with anti-corrosive powder coating,inner tank made of pure electrolytic copper/stainless steel , Tubular copper sheathed and Nickel plated heating element/ twin ceramic cartridge heating element, stem type thermostat and thermal cut out,Dual indicating lamps for power supply and thermostat,PUF insulation, Pressure release valve,fusible plug etc. as required held in position with 4 no. rack bolts,duly wired with 3 core 2.5 Sqmm PVC insulated & sheathed copper conductor and 16 A three pin plug top,including making inlet,outlet heavy gauge C.P. connection,testing etc. as required. | | | | |
| 17.17.1.1 | 6 Ltr. | Each | 150.00 | 3888.00 | 3428.00 |
| 17.17.1.2 | 10 Ltr. | Each | 150.00 | 4232.00 | 3715.00 |
| 17.17.1.3 | 15 Ltr. | Each | 150.00 | 4922.00 | 4348.00 |
| 17.17.1.4 | 25 Ltr. | Each | 200.00 | 5720.00 | 5145.00 |
| 17.17.1.5 | 35 Ltr. | Each | 200.00 | 6525.00 | 5835.00 |
| 17.17.1.6 | 50 Ltr. | Each | 250.00 | 8242.00 | 7782.00 |
| 17.17.2 | P & F ISI marked (IS:2082) Horizontal storage water heater with outer casing made of M.S.sheet finished with anti-corrosive powder coating,inner tank made of pure electrolytic copper/stainless steel , Tubular copper sheathed and Nickel plated heating element/ twin ceramic cartridge heating element, stem type thermostat and thermal cut out,Dual indicating lamps for power supply and thermostat,PUF insulation, Pressure release valve,fusible plug etc. as required held in position with 4 no. rack bolts,duly wired with 3 core 2.5 Sqmm PVC insulated & sheathed copper conductor and 16 A three pin plug top,including making inlet,outlet heavy gauge C.P. connection,testing etc. as required. | | | | |
| 17.17.2.1 | 6 Ltr. | Each | 150.00 | 4002.00 | 3600.00 |
| 17.17.2.2 | 10 Ltr. | Each | 150.00 | 4118.00 | 3542.00 |
| 17.17.2.3 | 15 Ltr. | Each | 150.00 | 4808.00 | 4118.00 |
| 17.17.2.4 | 25 Ltr. | Each | 200.00 | 5548.00 | 4858.00 |
| 17.17.2.5 | 35 Ltr. | Each | 200.00 | 6468.00 | 5662.00 |
| 17.17.2.6 | 50 Ltr. | Each | 250.00 | 8185.00 | 7265.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|---|-------------|--------------|---------------|---------------|
| | | | Labour Rate | Group1 | Group 2 |
| 17.17.3 | P & F stem type ISI marked (IS 3017 / 85) snap action adjustable thermostat storage water heater including making connection testing etc. as required. | Each | 10.00 | 200.00 | 160.00 |
| 17.17.3.1 | 11" stem thermostat | Each | 10.00 | 165.00 | 125.00 |
| 17.17.3.2 | 7" stem thermostat | Each | 10.00 | 154.00 | 114.00 |
| 17.17.4 | P & F stem type, ISI marked, push to reset type auto thermal cut off and rated at 20 A 250 V including testing etc. as required. | Each | 10.00 | 154.00 | 119.00 |
| 17.17.5 | P & F ISI marked (IS:4159) marked copper sheathed,nickle plated, mineral filled heating element including making connection testing etc as required. | | | | |
| 17.17.5.1 | 3.0 KW | Each | 20.00 | 457.00 | 336.00 |
| 17.17.5.2 | 2.0 KW | Each | 20.00 | 446.00 | 325.00 |
| 17.17.6 | P&F twin ceramic cartridge, shock and hard water proof heating element including making connecton testing etc as required | | | | |
| 17.17.6.1 | 3.0 KW | Each | 20.00 | 687.00 | |
| 17.17.6.2 | 2.0 KW | Each | 20.00 | 584.00 | |
| 17.17.7 | P & F base plate assembly with neoprene rubber gasket, inlet socket with inbuilt NRV/ PRV and drain out system and outlet socket pipe,fusible plug assembly,mounting hardwares complete etc. as required. | | | | |
| 17.17.7.1 | upto 10 Ltr. Capacity SWH | Each | 40.00 | 799.00 | 569.00 |
| 17.17.7.2 | 15 Ltr. To 50 Ltr. Capacity SWH | Each | 40.00 | 914.00 | 684.00 |
| 17.17.8 | P & F inlet socket with built in safety valve as required. | Each | 20.00 | 170.00 | |
| 17.17.9 | P & F fusible plug pipe assembly for storage water heater as required | Each | 20.00 | 141.00 | 100.00 |
| 17.17.10 | P & F fusible tablet in fusible plug assembly as required | Each | 3.00 | 17.00 | 13.00 |
| 17.17.11 | P& F bottom cover with half cover set for storage water heater as required. | Each | 50.00 | 470.00 | 366.00 |
| 17.17.12 | P&F outlet socket made out of brass for SWH | Each | 10.00 | 56.00 | |
| 17.17.13 | P & F neon indicating lamp of superior quality for storage water heater | Each | 10.00 | 33.00 | |
| 17.17.14 | P&F Brass vent Nut with washer for SWH | Each | 10.00 | 56.00 | |

| Code No | Description | Unit | Rate in Rs. | |
|------------|---|-------|--------------|-----------------|
| | | | Labour Rate | Group 1 Group 2 |
| 17.17.15 | P & F heavy duty ISI marked C.P. vacuum release valve for Storage water heater as required. | Each | 20.00 | 198.00 |
| 17.17.16 | P&F Base plate neoprene gasket for SWH | Each | 10.00 | 39.00 |
| 17.17.17 | P & F ISI marked C.P. adjustable type non return valve for storage water heater. | Each | 20.00 | 146.00 |
| 17.17.18 | P & F ISI marked pressure reducing valve for storage water heater as required. | Each | 35.00 | 742.00 |
| 17.17.19 | P & F of 13 mm angle valve for storage water heater as required. | | | |
| 17.17.19.1 | C.P. ISI marked | Each | 15.00 | 228.00 |
| 17.17.19.2 | Brass ISI marked | Each | 15.00 | 182.00 |
| 17.17.20 | P & F heavy duty C.P. connection for storage water heater for inlet and outlet of length 300-600 mm including the cost of nuts, washers etc as required. | Set | 25.00 | 169.00 |
| 17.17.21 | Charges for brass welding of inner copper tank for storage water heater including opening,refixing,testing etc. as required | P.Job | 150.00 | 322.00 |
| 17.17.22 | Charges for descaling of storage water heater including required chemical, opening, refixing, testing as complete. | P.Job | 50.00 | 165.00 |
| 17.17.23 | Charges for Fixing of storage water heater including four nos. rag bolts of suitable size,supply & making heavy gauge inlet, outlet C.P. connection, testing, carrying from store to site,etc. as required. | | | |
| 17.17.23.1 | 10 to 15 Ltr capacity | Each | 200.00 | 430.00 |
| 17.17.23.2 | 25 to 50 Ltr capacity | Each | 250.00 | 480.00 |
| 17.17.24 | P & F solar hot water system with ISI marked M S water collector duly insulated and painted having following heating capacity at 60 degree centigrade, insulated stainless steel storage tank with electrical back up system including making inlet,outlet heavy gauge C.P. connection, testing etc. as required. | | | |
| 17.17.24.1 | 125 litre/ day | Each | 100.00 | 30000.00 |
| 17.17.24.2 | 250 litre/ day | Each | 150.00 | 60000.00 |
| 17.17.24.3 | 375 litre/ day | Each | 200.00 | 80000.00 |

17.18 INDOOR LIGHTING

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.18.1 | P & F strip type fluorscent tube fitting fabricated from (CRCA sheet and finished with powder coating / stove enamelled paint)/(extruded non corrosive UV resist EP channel) complete with accessories like (OCCB, starter, starter seat)/ EB, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube) | | | | |
| 17.18.1.1 | 1 X 18 Watts with OCCB | Each | 20.00 | 308.00 | 282.00 |
| 17.18.1.2 | 1 X 36 Watts with OCCB | Each | 20.00 | 321.00 | 293.00 |
| 17.18.1.3 | 1 X 36 Watts with EB | Each | 20.00 | 436.00 | 398.00 |
| 17.18.1.4 | 1 X 28 Watts with EB | Each | 20.00 | 734.00 | 700.00 |
| 17.18.2 | P & F box type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating / stove enamelled paint complete with accessories like (OCCB, starter, starter seat)/ EB, condensor,rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube) | | | | |
| 17.18.2.1 | 1 X 36 Watts with OCCB | Each | 20.00 | 700.00 | 640.00 |
| 17.18.2.2 | 2 X 36 Watts with OCCB | Each | 20.00 | 1045.00 | 950.00 |
| 17.18.2.3 | 1 X 36 Watts with EB | Each | 20.00 | 1195.00 | 1090.00 |
| 17.18.2.4 | 2 X 36 Watts with EB | Each | 20.00 | 1790.00 | 1630.00 |
| 17.18.2.5 | 1 X 28 Watts with EB | Each | 20.00 | 1180.00 | 1075.00 |
| 17.18.2.6 | 2 X 28 Watts with EB | Each | 20.00 | 1730.00 | 1575.00 |
| 17.18.3 | P & F industrial fluorescent tube fitting with reflector fabricated from CRCA sheet and finished with powder coating / vitreous enamelled complete with accessories like (OCCB, starter, starter seat)/ EB, condensor,rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required.(without tube) | | | | |
| 17.18.3.1 | With powder coated reflector | | | | |
| 17.18.3.2 | 1 X 36 Watts with OCCB | Each | 30.00 | 1485.00 | 1355.00 |
| 17.18.3.3 | 2 X 36 Watts with OCCB | Each | 30.00 | 1590.00 | 1450.00 |
| 17.18.3.4 | 1 X 36 Watts with EB | Each | 20.00 | 2260.00 | 2050.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.18.3.5 | 2 X 36 Watts with EB | Each | 20.00 | 1500.00 | 1365.00 |
| 17.18.3.6 | 1 X 28 Watts with EB | Each | 20.00 | 2060.00 | 1875.00 |
| 17.18.3.7 | 2 X 28 Watts with EB | Each | 20.00 | 2025.00 | 1845.00 |
| 17.18.3.8 | With vitreous enamelled reflector | | | | |
| 17.18.3.9 | 1 X 36 Watts with OCCB | Each | 30.00 | 1015.00 | 925.00 |
| 17.18.3.10 | 2 X 36 Watts with OCCB | Each | 30.00 | 1410.00 | 1285.00 |
| 17.18.4 | P & F Mirror optics type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating,aluminium mirror reflector standard cross louvers complete with accessories like (OCCB, starter, starter seat)/ EB, condensor, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube) | | | | |
| 17.18.4.1 | Surface mounting | | | | |
| 17.18.4.2 | 1 X 36 Watts with OCCB | Each | 35.00 | 1695.00 | 1545.00 |
| 17.18.4.3 | 2 X 36 Watts with OCCB | Each | 35.00 | 2400.00 | 2185.00 |
| 17.18.4.4 | 1 X 36 Watts with EB | Each | 20.00 | 2240.00 | 2035.00 |
| 17.18.4.5 | 2 X 36 Watts with EB | Each | 20.00 | 3190.00 | 2900.00 |
| 17.18.4.6 | 2 X 28 Watts with EB | Each | 20.00 | 4350.00 | 3955.00 |
| 17.18.4.7 | Recess mounting | | | | |
| 17.18.4.8 | 1 X 36 Watts with OCCB | Each | 35.00 | 1780.00 | 1620.00 |
| 17.18.4.9 | 2 X 36 Watts with OCCB | Each | 35.00 | 2165.00 | 1970.00 |
| 17.18.4.10 | 1 X 36 Watts with EB | Each | 20.00 | 2260.00 | 2058.00 |
| 17.18.4.11 | 2 X 36 Watts with EB | Each | 20.00 | 2820.00 | 2565.00 |
| 17.18.4.12 | 2 X 28 Watts with EB | Each | 20.00 | 4695.00 | 4270.00 |
| 17.18.5 | P & F Mirror optics type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating,having aluminium mirror reflector,low glare V shape double parabolic cross louvers,complete with accessories like (OCCB, starter, starter seat)/ EB, condensor, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube) | | | | |
| 17.18.5.1 | Surface mounting | | | | |
| 17.18.5.2 | 2 X 36 Watts with OCCB | Each | 35.00 | 2930.00 | 2670.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.18.5.3 | Recess mounting | | | | |
| 17.18.5.4 | 2 X 18 Watts with OCCB | Each | 35.00 | 1804.00 | 1704.00 |
| 17.18.5.5 | 4 X 18 Watts with OCCB | Each | 40.00 | 3090.00 | 2815.00 |
| 17.18.5.6 | 1 X 36 Watts with OCCB | Each | 35.00 | 2195.00 | 2000.00 |
| 17.18.5.7 | 2 X 36 Watts with OCCB | Each | 35.00 | 3170.00 | 2885.00 |
| 17.18.5.8 | 4 X 14 Watts with EB | Each | 20.00 | 5500.00 | 5005.00 |
| 17.18.5.9 | 2 X 36 Watts CFL with EB | Each | 20.00 | 3505.00 | 3190.00 |
| 17.18.5.10 | 2 X 54/55 Watts with EB | Each | 20.00 | 6360.00 | 5785.00 |
| 17.18.6 | P & F dark lighter technique mirror optics type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating, having aluminium mirror reflector with cat.-2 mirror system low glare V shape double parabolic cross louvers for 65 degree cut off as per LG 3 guide of CIBSE, UK complete with accessories like (OCCB, starter, starter seat)/ EB, condensor, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube) | | | | |
| 17.18.6.1 | Surface mounting | | | | |
| 17.18.6.2 | 2 X 36 Watts with OCCB | Each | 35.00 | 3252.00 | 2960.00 |
| 17.18.6.3 | 2 X 28 Watts with OCCB | Each | 35.00 | 5794.00 | 5270.00 |
| 17.18.6.4 | 2 X 36 Watts with EB | Each | 35.00 | 3830.00 | 3485.00 |
| 17.18.6.5 | Recess mounting | | | | |
| 17.18.6.6 | 4 X 18 Watts with OCCB | Each | 40.00 | 3287.00 | 2992.00 |
| 17.18.6.7 | 1 X 36 Watts with OCCB | Each | 35.00 | 2407.00 | 2192.00 |
| 17.18.6.8 | 2 X 36 watts with OCCB | Each | 35.00 | 3390.00 | 3085.00 |
| 17.18.6.9 | 1 X 36 Watts with EB | Each | 20.00 | 2660.00 | 2420.00 |
| 17.18.6.10 | 2 X 36 Watts with EB | Each | 20.00 | 3815.00 | 3470.00 |
| 17.18.6.11 | 2 X 28 Watts with EB | Each | 20.00 | 4778.00 | 4345.00 |
| 17.18.7 | P & F Fluorscent tube rod in existing fixtures as required | | | | |
| 17.18.7.1 | Flourscent powder coated | | | | |
| 17.18.7.2 | 18/20 Watts | Each | 2.00 | 52.00 | 50.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.18.7.3 | 36/40 Watts | Each | 2.00 | 56.00 | 53.00 |
| 17.18.7.4 | Triphosphor coated | | | | |
| 17.18.7.5 | 18/20 Watts | Each | 2.00 | 102.00 | 95.00 |
| 17.18.7.6 | 36/40 Watts | Each | 2.00 | 90.00 | 85.00 |
| 17.18.7.7 | T5 Lamps | Each | | | |
| 17.18.7.8 | 14 Watts | Each | 2.00 | 200.00 | |
| 17.18.7.9 | 28 Watts | Each | 2.00 | 225.00 | 200.00 |
| 17.18.8 | P & F Ballast for existing FTL / CFL fixture as required. | | | | |
| 17.18.8.1 | Polyester copper ballast 18/36 Watts suitable for FTL | Each | 5.00 | 200.00 | 180.00 |
| 17.18.8.2 | Vacuum pressure impregnated open construction(VPIT) copper ballast 18/36 Watts for FTL | Each | 5.00 | 225.00 | 190.00 |
| 17.18.8.3 | High frequency electronic ballast 18/36 watts for FTL | Each | 5.00 | 480.00 | 442.00 |
| 17.18.8.4 | Vacuum pressure impregnated copper ballast for 9/11/13/18 watt CFL | Each | 5.00 | 185.00 | 170.00 |
| 17.18.8.5 | Vacuum pressure impregnated copper ballast for 26 watt CFL | Each | 5.00 | 200.00 | 175.00 |
| 17.18.9 | P & F Capacitors for power factor improvement in existing fluorscent lamp fixture as required. | | | | |
| 17.18.9.1 | 4 Mfd 250 V | Each | 3.00 | 110.00 | 100.00 |
| 17.18.9.2 | 8 Mfd 250 V | Each | 3.00 | 150.00 | 130.00 |
| 17.18.10 | P & F starter for existing fluorscent lamp fixture as required. | | | | |
| 17.18.10.1 | FSU | Each | 1.00 | 10.00 | 8.00 |
| 17.18.10.2 | FS-2 rated 110 V for 2x20 W FTL luminaire with single ballast | Each | 1.00 | 30.00 | 20.00 |
| 17.18.11 | P & F fluorscent tube fitting fabricated from prephosphated and powder coated CRCA steel channel with coloured ABS end caps complete with accessories like copper wound open construction (VPIT) ballast, starter,starter seat.rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube) | | | | |
| 17.18.11.1 | 1 X 18/20 Watts | Each | 20.00 | 500.00 | 458.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.18.11.2 | 1 X 36/40 Watts | Each | 20.00 | 593.00 | 540.00 |
| 17.18.12 | P & F of recess mounting CFL luminaire made from powder coated CRCA sheet with perforations on the body with metalised polystrene louvers, complete with accessories extra low watt loss copper ballast,starter,holder,condensor,terminal block duly prewired with copper conductor including making connections, testing etc. as required (without lamp) | | | | |
| 17.18.12.1 | 2 X PL-36 Watt | Each | 40.00 | 3890.00 | 3540.00 |
| 17.18.12.2 | 3 X PL-36 Watt | Each | 40.00 | 4458.00 | 4057.00 |
| 17.18.13 | P & F of surface/ recess mounting CFL luminaire made from powder coated CRCA sheet with aluminium reflector assembly electrochemically brightened and anodized cross louvers, complete with accessories e copper ballast, starter, holder, terminal block duly prewired with copper conductor including making connections, testing etc. as required (without lamp) | | | | |
| 17.18.13.1 | Surface mounting 2 X PL-9/11 Watt | Each | 25.00 | 1250.00 | 1135.00 |
| 17.18.13.2 | Recess mounting 2 X PL-9/11 Watt | Each | 25.00 | 1125.00 | 1025.00 |
| 17.18.14 | P & F of surface mounting 2 X 9/11 watt CFL luminaire made from engineering plastic with aluminium reflector assembly electrochemically brightened and anodized cross louvers, complete with accessories copper ballast,starter,holder,terminal blockduly prewired with copper conductor including making connections, testing etc. as required (without lamp) | Each | 25.00 | 1070.00 | 975.00 |
| 17.18.15 | P & F adjustable type recess mounting down lighter with electrochemically brightened and anodized aluminium reflector complete with holder prewired upto terminal block including making connection testing etc.as required. (without lamp) | | | | |
| 17.18.15.1 | without ballast suitable for GLS lamp/direct fit (retrofit) CFL | Each | 15.00 | 355.00 | 325.00 |
| 17.18.15.2 | with copper ballast and polycarbonate lamp holder suitable for CFL 9/11/13/18 watt | Each | 15.00 | 620.00 | 565.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.18.16 | P & F low depth recess mounting down lighter with electrochemically brightened and anodized aluminium reflector complete with ballast, holder prewired upto terminal block including making connection testing etc.as required. (without lamp) | | | | |
| 17.18.16.1 | suitable for 1 X PL-11/13/18 watt | Each | 15.00 | 930.00 | 850.00 |
| 17.18.16.2 | suitable for 2 X PL-11/13/18 watt | Each | 15.00 | 1190.00 | 1080.00 |
| 17.18.17 | P & F 9/11/13/ Watt CFL mirror light with CRCA powder coated housing,diffuser,end covers,copper ballast,holder prewired upto terminal block including making connection testing etc. as required (without tube) | Each | 20.00 | 505.00 | 460.00 |
| 17.18.18 | P & F energy efficient direct fit (Retrofit) composite compact flourscent lamp of energy saving labelling not less than 3 star in existing holder/ fixture as required. | | | | |
| 17.18.18.1 | 5 Watt | Each | 1.00 | 135.00 | 125.00 |
| 17.18.18.2 | 8/9 Watt | Each | 1.00 | 150.00 | 135.00 |
| 17.18.18.3 | 11 Watt | Each | 1.00 | 155.00 | 140.00 |
| 17.18.18.4 | 14/15 Watt | Each | 1.00 | 160.00 | 145.00 |
| 17.18.18.5 | 18/20 Watt | Each | 1.00 | 210.00 | 190.00 |
| 17.18.19 | P & F two pin energy efficient compact flourscent lamp in existing holder/fixture as required. | | | | |
| 17.18.19.1 | 7/9 watt | Each | 1.00 | 94.00 | 86.00 |
| 17.18.19.2 | 11 watt | Each | 1.00 | 100.00 | 90.00 |
| 17.18.19.3 | 13/18 watt | Each | 1.00 | 157.00 | 140.00 |
| 17.18.19.4 | 26 watt | Each | 1.00 | 200.00 | 180.00 |
| 17.18.19.5 | 36 Watt 4 pin | Each | 1.00 | 215.00 | 195.00 |
| 17.18.19.6 | 54/55 Watt 4 pin | Each | 1.00 | 350.00 | 315.00 |
| 17.18.20 | P & F round/square shape surface mounting ceiling fitting complete with holder,aluminium anodized back plate glass globe of approved design,prewired terminal block making connection,testing etc. as required. | | | | |
| 17.18.20.1 | 150 mm | Each | 12.00 | 91.00 | |
| 17.18.20.2 | 200 mm | Each | 12.00 | 103.00 | |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|-------------|----------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.18.20.3 | 250 mm | Each | 12.00 | 110.00 | |
| 17.18.21 | P & F of light sensing device meant to be integrated into the luminaire adding a regulating function in combination with a regulating ballast. The device should have clips for easy mounting to be clicked on to the lamp using special clip. The device should be able to handle maximum of 16 regulating HFR ballasts to adjust the lighting level of the luminaire in accordance with the incoming daylight levels. | Each | 35.00 | 2580.00 | |
| 17.18.22 | P & F of occupancy sensor with a build in lighting switch designed for automatic switching on/off of lights in case of no occupancy for a pre-determined amount of time in indoor applications. The device must have a circular detection pattern for a range of 8/ 6.7 meters diameter at a mounting height of 2.7 meters. The device should be able to work with electronic ballasts and handle lighting loads upto 10A(GP1)/ 6A (GP2). | Each | 35.00 | 13410.00 | 5875.00 |
| 17.18.23 | P & F of IP 65 protected LED down lighter luminaire with housing made of Die Cast aluminium housing with powder coated finish and toughened glass diffuser, 1W LED, supply accessories(220 V, 50 HZ/ 12 V DC) complete in all respect.Available with 5 color options – white, red, amber, blue and green | Each | 35.00 | | 2440.00 |
| 17.18.24 | P & F of IP 65 protected LED cabinet luminaire with 600mm length housing made of aluminium with unit boards of 6X 2W/ 12X1.1W LEDs, supply accessories(220 V, 50 HZ/ 24 V DC) complete in all respect. Available with 2 color options – white, warm white. | Each | 35.00 | | 7830.00 |
| 17.18.25 | P & F of IP 65 protected LED strips with 300mm length housing made of aluminium/ coloured acrylic cover with unit boards of 24 V DC LEDs. Available with 5 color options – white, red, amber, blue and green | | | | |
| 17.18.25.1 | 300mm length 24 X .08W/ 25X 0.12W | Each | 30.00 | 3350.00 | 3300.00 |
| 17.18.25.2 | 600mm length 48 X .08W | Each | 40.00 | 4500.00 | 4430.00 |
| 17.18.26 | P & F of supply accessories of following capacities complete in all respect. | | | | |
| 17.18.26.1 | Input 220/230 V, 50 Hz and output 12V D.C. (50/ 60W) | Each | 15.00 | 3200.00 | 1632.00 |
| 17.18.26.2 | Input 220/230 V, 50 Hz and output 24V D.C. (50/ 60W) | Each | 15.00 | 3200.00 | 1632.00 |
| 17.18.26.3 | Input 220/230 V, 50 Hz and output 15V D.C. (50/ 60W) | Each | 15.00 | 3200.00 | 1632.00 |

| Code No | Description | Unit | Rate in Rs. | |
|----------|--|------|-------------|-----------------|
| | | | Labour Rate | Group-1 Group-2 |
| 17.18.27 | P & F 'L' type wall bracket suitable for GLS lamp with back plate of size 150mm x 40mm x 3mm glass shade of dia150/100 mm,brass holder duly prewired with pvc copper wire including making connection testing etc. as required. | Each | 10.00 | 90.00 |
| 17.18.28 | P & F of ball socket arrangement (a set of two) for suspension of fittings from ceiling made of chrome plated anodised metal complete in all respect and excluding cost of down rod. | Each | 20.00 | 60.00 |
| 17.18.29 | Supply and fixing of 1 x 26 W CFL High performance suspended luminaires with Bifunctional reflector, direct/indirect consisting of upper part in polycarbonate with concentric channel prisms for ceiling oriented indirect component and parabolic lower reflector made of post anodised aluminium with a surface purity of 99.98%, highly specular inner surface, semi-specular outer surface, facetting in lower reflector, Electronic (E) Control gear, 3 pole plug in connection terminal including cost of lamps complete in all respect. The cut off angle is at less than 30'. | Each | 70.00 | 18000.00 |
| 17.18.30 | Supply and fixing of Wall mounted Indirect lighting luminaire, with specular reflector made of reflection intensifying aluminium with all accessories including Electronic control gear suitable for 2 x 42 W CFL Lamp, 3 pole plug in connection terminal including cost of lamps complete in all respect.. | Each | 70.00 | 8500.00 |
| 17.18.31 | Supply and fixing of 2 x 18/26 W CFL Recessed square downlight with Semi- specular reflector with reflection intensifying surface, size 231 x231x100mm and with electronic control gear and with accessories, 3 pole plug in connection terminal including cost of lamps complete in all respect. | Each | 70.00 | 12800.00 |
| 17.18.32 | Supply and fixing of 2 x 18/26 W CFL Recessed square downlights C2, with highly specular reflector with reflection intensifying surface, size 282x282x175mm with electronic control gear and with accessories, 3 pole plug in connection terminal including cost of lamps complete in all respect.. | Each | 70.00 | 15300.00 |
| 17.18.33 | Supply and fixing of 2 x 54 W T5 Suspended direct/indirect luminaires with Ultra low cross section louvre in UXP Technology, semi specular reflectance value 98%. Luminance limited to L | Each | 70.00 | 15400.00 |

| Code No | Description | Unit | Rate in Rs. | |
|----------|---|------|-------------|-----------------|
| | | | Labour Rate | Group-1 Group-2 |
| 17.18.34 | Supply and fixing of Recessed circular with RGB LED with color change control in translucent cone. Equipment used 3 x LED RGB with color change control with LED lamps complete in all respect. | Each | 70.00 | 12000.00 |
| 17.18.35 | Supply and fixing of Recessed rectangular spotlight can be pivoted by +/- 40 degree as well as oriented by 175 degree. Housing with aluminium, brushed with transparent or white coating for single module with low voltage halogen lamp QR-LP 111 max. 50 W complete in all respect. | Each | 70.00 | 4200.00 |
| 17.18.36 | Supply and fixing of 2 x 18/26 W CFL Recessed square downlight with Semi- specular reflector with reflection intensifying surface, size 282 x282x175mm and with electronic control gear and with accessories, lamps, complete in all respect. | Each | 70.00 | 15000.00 |

Note:1 Add 10% extra on rates of Group 1 for rates of Group A1

17.19 OUTDOOR LIGHTING

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.1 | P & F IP-43 protected street light luminaire on existing bracket suitable for FTL, made out from CRCA sheet steel finished with stove enameled paint, having deep drawn aluminium alloy canopy reflector cum control gear tray, clear ribbed acrylic diffuser held with synthetic gasket, with all necessary accessories copper wound ballast, capacitor, starter, holder prewired with pvc insulated copper conductor including making connection testing etc. as required. (without tube) | | | | |
| 17.19.1.1 | 1 X 36 Watt | Each | 70.00 | 1430.00 | 1300.00 |
| 17.19.1.2 | 2 X 36 Watt | Each | 70.00 | 2089.90 | 1905.00 |
| 17.19.2 | P & F IP-54 protected street light luminaire on existing bracket suitable for HPMV lamp, made out from powder coated single piece die cast aluminium housing electrochemically brightened and anodized aluminium reflector, UV stabilised acrylic bowl cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp) | | | | |
| 17.19.2.1 | 1 X 80 Watt | Each | 75.00 | 3210.00 | 2925.00 |
| 17.19.2.2 | 1 X 125 Watt | Each | 75.00 | 3335.00 | 3040.00 |
| 17.19.2.3 | 1 X 250 Watt | Each | 75.00 | 4630.00 | 4215.00 |
| 17.19.3 | P & F IP-54 protected street light luminaire on existing bracket suitable for HPSV/ MH lamp, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, UV stabilised acrylic bowl cover/toughened glass cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp) | | | | |
| 17.19.3.1 | 1X70 Watt | Each | 75.00 | 3455.00 | 3150.00 |
| 17.19.3.2 | 1 X 150 Watt | Each | 75.00 | 5125.00 | 4665.00 |
| 17.19.3.3 | 1 X 250 Watt | Each | 75.00 | 5734.50 | 5220.00 |
| 17.19.3.4 | 1 X 400 Watt | Each | 100.00 | 6325.00 | 5760.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.4 | P & F IP-54 protected street light luminaire on existing bracket suitable for HPSV lamp, made out from powder coated single piece deep drawn aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector,UV stabilised acrylic bowl cover/toughened glass cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp) | | | | |
| 17.19.4.1 | 1 X 70 Watt | Each | 75.00 | 2990.00 | 2725.00 |
| 17.19.4.2 | 1 X 150 Watt | Each | 75.00 | 4340.00 | 3950.00 |
| 17.19.4.3 | 1 X 250 Watt | Each | 75.00 | 5105.00 | 4650.00 |
| 17.19.5 | P & F IP-65 protected street light luminaire on existing bracket suitable for HPSV/ MH LAMP, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, heat resistant and toughened glass cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp) | | | | |
| 17.19.5.1 | 1 X 70 Watt | Each | 75.00 | 3512.50 | 3195.00 |
| 17.19.5.2 | 1 X 150 Watt | Each | 75.00 | 5420.00 | 4935.00 |
| 17.19.5.3 | 1 X 250 Watt | Each | 100.00 | 6000.00 | 5460.00 |
| 17.19.6 | P & F IP-43 protected street light luminaire on existing bracket suitable for CFL, made out from CRCA sheet steel finished/ Aluminium coating with stove enameled paint, having deep drawn aluminium alloy canopy reflector cum control gear tray, clear ribbed acrylic diffuser held with synthetic gasket, with all necessary accessories copper wound ballast, starter, holder prewired with pvc insulated copper conductor including making connection testing etc. as required. (without tube) | | | | |
| 17.19.6.1 | 1 X 9/11 Watt | Each | 60.00 | 1080.00 | 990.00 |
| 17.19.6.2 | 1 X 13/18 Watt | Each | 60.00 | 1140.00 | 1040.00 |
| 17.19.6.3 | 1 X 36 Watt | Each | 60.00 | 1295.00 | 1185.00 |
| 17.19.7 | P & F IP-43 protected post top lantern suitable for HPMV/ HPSV/ MLL lamp with integral control gear cast aluminium housing comprising of copper ballast, capacitor, ignitor covered with suitably gasketed conical / spherical / elliptical polyethylene moulded diffuser of dia approx. 605 mm, prewired with pvc insulated copper conductor including making connection testing etc. as required (without lamp) | | | | |
| 17.19.7.1 | 1 X 80 Watt HPMV Lantern | Each | 50.00 | 3105.00 | 2830.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.7.2 | 1 X 125 Watt HPMV Lantern | Each | 50.00 | 3230.00 | 2940.00 |
| 17.19.7.3 | 160 Watt MLL Lantern without control gear | Each | 45.00 | 1860.00 | 1695.00 |
| 17.19.7.4 | 1 X 70 Watt HPSV Lantern | Each | 50.00 | 3570.00 | 3250.00 |
| 17.19.8 | P & F IP65 protected decorative lighting luminaire Post top/ Bollard suitable for following lamps, made of powder coated cast aluminium housing, moulded acrylic lamp compartment with built in anodized aluminium louvers for lamp shielding and glare control, metallic lid top cover, including the cost of control gear complete in all respect. Bollards are including cost of decorative base pipe/ plate. (without lamp) | | | | |
| 17.19.8.1 | 70 Watt HPSV/125 Watt HPMV Post top | Each | 100.00 | 6330.00 | |
| 17.19.8.2 | 70 Watt Metal Halide Bollard | Each | 75.00 | 5995.00 | |
| 17.19.8.3 | 18/13 Watt CFL Bollard | Each | 75.00 | 5275.00 | |
| 17.19.9 | P & F IP-65 protected decorative lighting luminaire Post top/ Bollard suitable for following lamps , made of powder coated die cast aluminium housing, UV stabilised polyethylene bowl, including the cost of control gear complete in all respect as required. Bollards are including cost of decorative base pipe/ plate. (without lamp) | | | | |
| 17.19.9.1 | 70 Watt Metal Halide Post top | Each | 100.00 | 5315.00 | |
| 17.19.9.2 | 70 watt HPSV/125 Watt HPMV Post top | Each | 100.00 | 5010.00 | |
| 17.19.9.3 | 70 Watt Metal Halide Bollard | Each | 75.00 | 5265.00 | |
| 17.19.9.4 | 18/13 Watt CFL Bollard | Each | 75.00 | 5455.00 | |
| 17.19.10 | P & F IP -54 protected flood light luminaire suitable for Tungston Halogen lamp comprising of powder coated die cast aluminium housing, electrochemically brightened and anodized textured aluminium reflector, covered with suitably gasketed heat resistant and toughened glass, porcelain holder, rewired with pvc insulated copper conductor up to terminal block including making connection testing etc. as required. (without lamp) | | | | |
| 17.19.10.1 | 1 X 500 Watt | Each | 50.00 | 920.00 | 840.00 |
| 17.19.10.2 | 1 X 1000 Watt | Each | 50.00 | 1790.00 | 1630.00 |
| 17.19.11 | P & F IP -65 protected integral flood light luminaire suitable for HPSV/ Metal halide lamp comprising of powder coated die cast aluminium housing, electrochemically brightened and anodized stippled aluminium reflector, covered with suitably gasketed heat resistant and toughened glass, porcelain holder, integral control gear box having copper ballast, capacitor, electronic ignitor prewired with pvc insulated copper conductor up to terminal block including making connection testing etc. as required. (with out lamp) | | | | |

| Code No | Description | Unit | Rate in Rs. | | |
|--------------|--|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.11.1 | 1 X 150 Watt | Each | 75.00 | 4795.10 | 4365.00 |
| 17.19.11.2 | 1 X 250 Watt | Each | 75.00 | 6670.00 | 6070.00 |
| 17.19.11.3 | 1 X 400 Watt | Each | 75.00 | 7125.00 | 6485.00 |
| 17.19.12 | P & F IP -54 protected non integral flood light luminaire suitable for HPSV/Metal halide lamp comprising of powder coated die cast aluminium housing, electrochemically brightened and anodized aluminium reflector, covered with suitably gasketed heat resistant and toughened glass, porcelain holder, non integral cast aluminium control gear box having copper ballast, capacitor, electronic ignitor prewired with pvc insulated copper conductor up to terminal block including making connection testing etc. as required. (without lamp) | | | | |
| 17.19.12.1 | 1 X 250 Watt | Each | 75.00 | 7035.00 | 6400.00 |
| 17.19.12.2 | 1 X 400 Watt | Each | 75.00 | 7640.00 | 6950.00 |
| 17.19.12.3 | 2 X 250 Watt | Each | 100.00 | 13522.20 | 12302.00 |
| 17.19.12.4 | 2 X 400 Watt | Each | 100.00 | 14582.60 | 13266.00 |
| 17.19.13 | P & F High pressure sodium vapour/ High pressure mercury vapour/ Metal halide/ Halogen lamp as required. | | | | |
| 17.19.13.1 | HPSV ovoid shell lamp | | | | |
| 17.19.13.1.1 | 70 Watt (without ignitor) | Each | 15.00 | 385.00 | |
| 17.19.13.1.2 | 150 Watt | Each | 15.00 | 590.00 | |
| 17.19.13.1.3 | 250 Watt | Each | 15.00 | 660.00 | |
| 17.19.13.1.4 | 400 Watt | Each | 15.00 | 810.00 | |
| 17.19.13.2 | HPSV tubular lamp | | | | |
| 17.19.13.2.1 | 70 Watt | Each | 15.00 | 420.00 | |
| 17.19.13.2.2 | 150 Watt | Each | 15.00 | 615.00 | |
| 17.19.13.2.3 | 250 Watt | Each | 15.00 | 685.00 | |
| 17.19.13.2.4 | 400 Watt | Each | 15.00 | 830.00 | |
| 17.19.13.3 | HPMV lamp | | | | |
| 17.19.13.3.1 | 80 Watt | Each | 15.00 | 175.00 | 160.00 |
| 17.19.13.3.2 | 125 Watt | Each | 15.00 | 180.00 | 165.00 |
| 17.19.13.3.3 | 160 Watt Direct fit | Each | 15.00 | 240.00 | 220.00 |
| 17.19.13.3.4 | 250 Watt | Each | 15.00 | 400.00 | 360.00 |
| 17.19.13.4 | Metal halide lamp double ended | | | | |
| 17.19.13.4.1 | 70 Watt | Each | 15.00 | 700.00 | 640.00 |
| 17.19.13.4.2 | 150 Watt | Each | 15.00 | 705.00 | 640.00 |
| 17.19.13.4.3 | 250 Watt | Each | 15.00 | 1170.00 | 1065.00 |
| 17.19.13.5 | Metal halide lamp single ended tubular | | | | |
| 17.19.13.5.1 | 250 Watt | Each | 15.00 | 1125.00 | 1025.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|--------------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.13.5.2 | 400 Watt | Each | 15.00 | 1210.00 | 1100.00 |
| 17.19.13.6 | Halogen tube lamp | | | | |
| 17.19.13.6.1 | 500 Watt | Each | 15.00 | 115.00 | 105.00 |
| 17.19.13.6.2 | 1000 Watt | Each | 15.00 | 135.00 | 125.00 |
| 17.19.14 | P & F Capacitors for power factor improvement in existing HPSV/ HPMV/ Metal halide lamp fixture as required. | | | | |
| 17.19.14.1 | 8 mfd | Each | 10.00 | 125.00 | 105.00 |
| 17.19.14.2 | 10 mfd | Each | 10.00 | 150.00 | 130.00 |
| 17.19.14.3 | 12 mfd | Each | 10.00 | 150.00 | 130.00 |
| 17.19.14.4 | 16 mfd | Each | 10.00 | 185.00 | 160.00 |
| 17.19.14.5 | 20 mfd | Each | 10.00 | 250.00 | 215.00 |
| 17.19.14.6 | 33 mfd | Each | 10.00 | 410.00 | 355.00 |
| 17.19.14.7 | 43 mfd | Each | 10.00 | 455.00 | 395.00 |
| 17.19.15 | P & F Electronic ignitor suitable for HPSV/ Metal halide lamp up to 30.0 Mtr. distance as required. | Each | 20.00 | 270.00 | 225.00 |
| 17.19.16 | P & F low loss electromagnetic polyester copper ballast suitable for HPMV / HPSV / Metal halide lamp luminaire as required. | | | | |
| 17.19.16.1 | For HPMV lamp | | | | |
| 17.19.16.1.1 | 80 Watt | Each | 20.00 | 635.00 | 580.00 |
| 17.19.16.1.2 | 125 Watt | Each | 20.00 | 680.00 | 620.00 |
| 17.19.16.1.3 | 250 Watt | Each | 20.00 | 1110.00 | 1010.00 |
| 17.19.16.2 | For HPSV/ Metal halide lamp | | | | |
| 17.19.16.2.1 | 70 Watt | Each | 25.00 | 700.00 | 640.00 |
| 17.19.16.2.2 | 150 Watt | Each | 25.00 | 1050.00 | 955.00 |
| 17.19.16.2.3 | 250 Watt | Each | 25.00 | 1480.00 | 1350.00 |
| 17.19.16.2.4 | 400 Watt | Each | 25.00 | 2065.00 | 1883.00 |
| 17.19.17 | P & F vacuum pressure impregnated copper ballast suitable for HPMV / HPSV / Metal halide lamp luminaire as required. | | | | |
| 17.19.17.1 | For HPMV lamp | | | | |
| 17.19.17.1.1 | 80 Watt | Each | 20.00 | 700.00 | 640.00 |
| 17.19.17.1.2 | 125 Watt | Each | 20.00 | 768.00 | 700.00 |
| 17.19.17.1.3 | 250 Watt | Each | 20.00 | 1130.00 | 1030.00 |
| 17.19.17.2 | For HPSV/Metal halide lamp | | | | |
| 17.19.17.2.1 | 70 Watt | Each | 25.00 | 770.00 | 705.00 |
| 17.19.17.2.2 | 150 Watt | Each | 25.00 | 1135.00 | 1035.00 |
| 17.19.17.2.3 | 250 Watt | Each | 25.00 | 1620.00 | 1475.00 |
| 17.19.17.2.4 | 400 Watt | Each | 25.00 | 2215.00 | 2015.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.18 | P & F IP-54 protected Bulkhead luminaire suitable for 100 Watt GLS / 11/13 Watt CFL lamp made out from Die cast alluminium alloy body, suitably gasketed frosted glass cover including making connection testing etc. as required. | | | | |
| 17.19.18.1 | 100 Watt GLS lamp | Each | 20.00 | 295.00 | 270.00 |
| 17.19.18.2 | 9/11/13 Watt CFL lamp | Each | 20.00 | 670.00 | 615.00 |
| 17.19.19 | P & F of IP 55 protected light controlled switch based on infrared sensing and daylight with built in over load protection, timer to switch OFF at preselected time. Switch shall have 7 day power backup without hampering of preset time and over ride facility for maintenance purpose | | | | |
| 17.19.19.1 | Suitable for 3 kw load direct lighting load (single phase) | Each | 25.00 | 5794.50 | 5270.00 |
| 17.19.19.2 | Suitable for 15 kw load (three phase) including contactor, MCB, cable glands, terminal block and locking arrangement | Each | 100.00 | 21550.00 | 19600.00 |
| 17.19.20 | Supply and erection of hot dipped galvanised steel swaged tubular pole conforming to IS: 2713-1980 (part I to II) with galvanised base plate of size 400mm x 400mm x 7mm in position including excavation of the pit and filling the same with C.C. of M-10 grade (1:3:6) from base plate to 50cm above ground level, with the help of steel frame not less than 40 cm dia up to 114.3mm outer dia and 50 cm beyond 114.3mm outer dia around the pole. Duly finished with cement plaster, earthing terminals , cable entry, GI cable sleeve complete as required. The pole shall be galvanised using ISI mark seamless tube for structural purpose. (SEE TABLE) | | | | |
| 17.19.20.1 | 7.5 Mtr. | Each | 450.00 | 5800.00 | 5260.00 |
| 17.19.20.2 | 8.5 Mtr. | Each | 450.00 | 6450.00 | 5850.00 |
| 17.19.20.3 | 9 Mtr. | Each | 500.00 | 7860.00 | 7125.00 |
| 17.19.20.4 | 10 Mtr. | Each | 700.00 | 11510.00 | 10425.00 |
| 17.19.20.5 | 11 Mtr. | Each | 750.00 | 12500.00 | 11330.00 |
| 17.19.20.6 | 12 Mtr. | Each | 800.00 | 16500.00 | 15000.00 |
| 17.19.21 | Add for supply and fixing of hot dipped galvanised Overhang of following size over the existing poles | | | | |
| 17.19.21.1 | 76.1mm OD x 3.25mm thickness | Each | | 530.00 | 480.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|------|-------------|---------------------|
| | | | Labour Rate | Group-1 Group-2 |
| 17.19.21.2 | 88.9mm OD x 3.25mm thickness | Each | | 700.00 630.00 |
| 17.19.22 | Supply and erection of Octagonal pole of following length and dimension as per table E-20 with base plate on the cement concrete foundation of M-15 grade (1:1.5:3) with the help of anchor bolts of grade 6.8 (IS 1367 P III). The pole shall be made of S-355JO grade steel sheet , folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning.(SEE TABLE) | | | |
| 17.19.22.1 | 7 Mtr. | Each | 1000.00 | 11800.00 10600.00 |
| 17.19.22.2 | 8 Mtr. | Each | 1100.00 | 12900.00 11600.00 |
| 17.19.22.3 | 9 Mtr. | Each | 1300.00 | 17650.00 16500.00 |
| 17.19.22.4 | 10 Mtr. | Each | 1500.00 | 19000.00 17500.00 |
| 17.19.23 | Supply, Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles | | | |
| 17.19.23.1 | Single arm overhang | Each | | 660.00 600.00 |
| 17.19.23.2 | Double arm overhang | Each | | 1310.00 1180.00 |
| 17.19.24 | Supply, erection testing and commissioning of high mast lighting system (as per CP3-TRT/1996 of ILE, UK) consisting of totally hot dip galvanised by single dipped method high mast, lantern carriage suitable for up to 12 nos luminaries, mast head assembly, two nos aviation obstruction neon lights, double drum type self sustaining winch, integral power tool(winch motor with control circuit) hot dipped galvanised heavy duty pipe lightening finial, suitable ropes and CC foundation of M-15 grade complete as required. The mast is constructed from mild steel plates (as per BS-EN 10025) cut and folded to form a polygonal section, telescopic jointed and welding as per BS 5135. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning of high mast. (TABLE) | | | |
| 17.19.24.1 | 16 Mtr HM (in 2 section) | Each | | 340000.00 290000.00 |
| 17.19.24.2 | 20 Mtr Hm (in 2 section) | Each | | 365000.00 315000.00 |
| 17.19.24.3 | 30 Mtr HM (in 3 section) | Each | | 450000.00 390000.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.25 | P & F IP-65 protected multi tap ballast street light luminaire on existing bracket suitable for HPSV LAMP, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, heat resistant and toughened glass cover and accessories like multi tap copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp) | | | | |
| 17.19.25.1 | 1 X 150/ 100 Watt | Each | 75.00 | 12264.83 | 11157.00 |
| 17.19.25.2 | 1 X 250/ 150 Watt | Each | 75.00 | 13522.50 | 12300.00 |
| 17.19.26 | P & F of aviation obstruction light luminaire comprising of yellow painted die cast aluminium alloy housing, built in 75 VA step up transformer, heat resistant clear glass cover, neon spiral lamp complete in all respect | Each | 20.00 | 5520.00 | 5020.00 |
| 17.19.27 | P & F of aviation obstruction light luminaire comprising of yellow painted die cast aluminium alloy housing, red coloured polycarbonate dome, 2x100 watt GLS lamp complete in all respect | Each | 20.00 | 2870.00 | 2600.00 |
| 17.19.28 | P & F of IP 65/ 67 protected LED strip flood light system with aluminium housing, 9 X 1W , 24V DC LED lamps with dynamic color changing capability available in quick connecting cable coupled with various mounting accessories. Ability to create 16.7 million uniform, smooth and brilliant colors without revealing any lamp image. Available in 5 colors – amber, green, blue, red and white. | Each | 50.00 | 17180.00 | 15620.00 |
| 17.19.29 | P & F of IP 65/ 67 protected LED flood light system with aluminium housing, 3 X 1W, 220V, 50Hz LED lamps with dynamic color changing capability available in quick connecting cable coupled with various mounting accessories. Ability to create 16.7 million uniform, smooth and brilliant colors without revealing any lamp image. Available in 5 colors – amber, green, blue, red and white. | Each | 50.00 | 7475.00 | 6795.00 |
| 17.19.30 | P & F of IP 65/ 67 protected LED driver over light system with Die cast housing, toughened glass diffuser, 6 X 1.2W, 220V, 50Hz LED lamps with various mounting accessories. Available in 5 colors – amber, green, blue, red and white. | Each | 50.00 | 18445.00 | 16770.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.19.31 | P & F of IP 68 protected LED underwater light system with Die cast housing, toughened glass diffuser, 9 X 1W, 12V DC LED lamps with dynamic color changing capability available in quick connecting cable coupled with various mounting accessories. Ability to create 16.7 million uniform, smooth and brilliant colors without revealing any lamp image. Available in 5 colors – amber, green, blue, red and white. | Each | 50.00 | 8380.00 | 7620.00 |
| 17.19.32 | Supply and erection of Decorative Cast Iron pole as per approved design of following length with base plate on the cement concrete foundation of M-15 grade (1:1.5:3) with the help of anchor bolts of grade 6.8 (IS 1367 P III). The pole shall be made of Cast Iron as per IS 210:1993, precision machining and filling job to achieve good finish and a fine coat of primer on each element before assembling. After assembling of each element one coat of primer and two coats of P.U. paint are applied. Approved coloured UV resist coating of mat/ glossy/ metallic finish followed after air drying of pole. The pole shall have a weatherproof flush door and locking arrangements, two/ one arm bracket of length of 430/380mm complete in all respect. | | | | |
| 17.19.32.1 | 2 Mtr. | Each | 100.00 | 16500.00 | 15000.00 |
| 17.19.32.2 | 2.6 Mtr. | Each | 120.00 | 19200.00 | 17500.00 |
| 17.19.32.3 | 3.0 Mtr. | Each | 120.00 | 21800.00 | 19700.00 |
| 17.19.33 | Add extra in rates of outdoor luminaires for switching module along with Multi-Tap ballast attachment with capability of auto changeover to lower wattage as per selected duration during non-peak hours. | Each | | 2400.00 | 2200.00 |
| 17.19.34 | Providing & fixing of IP-54 protected street light luminaire on existing bracket suitable for '36' watt CFL, made out from polycarbonate cement gray in bult colour finished with electro chemically brightened and anodized aluminum alloy canopy reflector cum control gear tray, UV stabilized unbreakable polycarbonate cover and accessories like copper wound VPIT ballast, capacitor, starter, holder pre wired with FR PVC insulated copper conductor including making connection testing etc. as required (Without CFL lamps) (United/ Ambica/ HPLE make) | | | | |
| 17.19.34.1 | 1 X 36 W CFL | Each | 50.00 | | 1300.00 |
| 17.19.34.2 | 2 x 36 Watt CFL | Each | 50.00 | | 1500.00 |
| Note1 | For item 17.19.20, 17.19.22, 17.20.1 Labour rate shall be considered as installation rate excluding cost of pole | | | | |
| Note2 | Add 10% extra on rates of Group 1 for rates of Group A 1 | | | | |

17.20 OVER-HEAD LINES

| Code No | Description | Unit | Rate in Rs. | |
|-----------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.20.1 | Supply and erection of MS swaged tubular pole as per IS 2713-1980(part I & II) and made out from tube of ISI mark for structural purpose, with MS base plate in position, including excavation of pit, filling the same with C.C. of M-10 grade (1:3:6) from bottom to 50 cm above the ground level with the help of steel frame of 40 cm dia upto bottom section of 114.3 mm OD & 50 cm dia beyond 114.3 mm OD, duly finished with cement plaster, GI cable sleeve, earthing terminal, cable entry, rubber paint upto CC level, red oxide in remaining portion, duly finished with two coats of Aluminium/enamel paint, approved by engineer incharge. The pole shall be as per following specification (See Table) | | | |
| 17.20.1.1 | 7.5 Mtr Long | Each | 200.00 | 3592.00 |
| 17.20.1.2 | 8.5 Mtr Long | Each | 200.00 | 3995.00 |
| 17.20.1.3 | 9.0 Mtr Long | Each | 200.00 | 4685.00 |
| 17.20.1.4 | 10 Mtr Long | Each | 200.00 | 6698.00 |
| 17.20.1.5 | 11.0 Mtr Long | Each | 300.00 | 7200.00 |
| 17.20.1.6 | 12.0 Mtr Long | Each | 300.00 | 9212.00 |
| 17.20.2 | Supply and fixing of pole overhang of 1 meter made of steel tube as per IS 2713-1980 (part I & II) of 76.1mm OD x 3.25mm thick with required nipple complete with painting etc as reqd. | | | |
| 17.20.2.1 | 76.1mm OD x 3.25mm thick | Each | | 300.00 |
| 17.20.2.2 | 88.9 mm OD x 3.25mm thick | Each | | 420.00 |
| 17.20.3 | Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect | | | |
| 17.20.3.1 | 8.0 Mtr long as per Discom specification | Each | 200.00 | 1465.00 |
| 17.20.3.2 | 9.0 Mtr long as per Discom specification | Each | 250.00 | 2032.00 |
| 17.20.3.3 | 10.0 Mtr long as per Discom specification | Each | 300.00 | 3002.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-------------|---|------|--------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.20.4 | Supply and erection of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd. | | | |
| 17.20.4.1 | Stay set of dia 20mm,2.4m long stay rod and anchor plate 380x380x6.4mm | Each | 180.00 | 801.00 |
| 17.20.4.2 | Stay set of dia 16mm,1.8m long stay rod and anchor plate 300x300x6.4mm | Each | 150.00 | 656.00 |
| 17.20.5 | Supply and fixing of cross arms as per Discom specification, made out from angle iron 50mmx 50mmx6mm having 'D' support for each insulator including all necessary nuts,bolts, holding clamp of 50x6mm flat etc as reqd. on existing pole or on wall and special accessories for XLPE insulated ABC overhead cable like I- hook, Dead End clamp assembly, Suspension clamp assembly as required | | | |
| 17.20.5.1 | For 2 wire system | Each | 20.00 | 124.00 |
| 17.20.5.2 | For 4 wire system | Each | 25.00 | 249.00 |
| 17.20.5.3 | For 2 wire ABC system | | 25.00 | 364.00 |
| 17.20.5.4 | For 4 wire ABC system | | 25.00 | 428.00 |
| 17.20.6 | Supply and fixing of LT porcelain pin insulator as per IS 1445-1997 suitable for working voltage 1100 volts including all accessories like hot dip GI forged spindle of 260mm long and nuts etc as reqd as per Discom specification. | | | |
| 17.20.6.1 | 105mm x 65mm | Each | 3.00 | 31.00 |
| 17.20.6.2 | 105mm x 80mm | Each | 3.00 | 40.00 |
| 17.20.6.3 | 120mm x 85mm | Each | 3.00 | 51.00 |
| 17.20.7 | Supply and fixing of porcelain shackle insulator as per IS:1443 1979 suitable for working on 1100 volts including hot dipped GI accessories and heavy duty hardwares etc as required as per Discom specification. | | | |
| 17.20.5.7.1 | 75mm x 90mm | Each | 5.00 | 51.00 |
| 17.20.5.7.2 | 100mm x 110mm | Each | 5.00 | 68.00 |
| 17.20.8 | Painting over the existing poles above ground level including overhang making surface well clean and apply two coats of aluminium/ enamel paint as approved with required T & P etc as required. | | | |
| 17.20.8.1 | pole of 7 to 9 mtr long | | | |

| Code No | Description | Unit | Rate in Rs. | |
|--------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.20.8.1.1 | with one overhang | Each | 35.00 | 81.00 |
| 17.20.8.1.2 | with two overhang | Each | 40.00 | 92.00 |
| 17.20.8.2 | pole of 10 to 12 mtr long | | | |
| 17.20.8.2.1 | with one overhang | Each | 65.00 | 122.00 |
| 17.20.8.2.2 | with two overhang | Each | 75.00 | 132.00 |
| 17.20.9 | Supplying and drawing overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification. | | | |
| 17.20.9.1 | 30 Sqmm of (6+1) 2.59mm (Weasel) | Mtr | 2.00 | 19.00 |
| 17.20.9.2 | 50 Sqmm of (6+1) 3.35 mm (Rabbit) | Mtr | 2.50 | 31.00 |
| 17.20.9.3 | 50 Sqmm of (6+1) 3.35 mm (Insulated Rabbit) | | 2.50 | 74.00 |
| 17.20.9.4 | 80 Sqmm of (6+1) 4.09 mm (Raccon) | Mtr | 3.00 | 46.00 |
| 17.20.9.5 | 100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog) | Mtr | 3.50 | 59.00 |
| 17.20.10 | Providing and fixing of fuse box size 250(H) x 200(W) x 150(D) mm with base shape accomodating the pole partly, fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 25mm x 3mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2/ 4 nos copper bus bar 150 x 20 x 3mm with brass screws suitable supports, earth terminal, inter connection, brass cable gland upto 10 Sqmm size cable, 2nos 16 Amp kitkat fuse of GROUP2 complete in all respect. | Each | 50.00 | 360.00 |
| 17.20.11 | Supply and fixing of 'V' type cross arms made of MS channel on the existing poles complete including all necessary nut and bolt etc with clamps as per Discom specification. | | | |
| 17.20.11.1 | 11kV cross arms (75 x 40 x 6.8 kg/mtr) | Each | 10.00 | 338.00 |
| 17.20.11.2 | 11kV cross arms (75 x 40 x 5.7 kg/mtr) | Each | 8.00 | 292.00 |
| 17.20.12 | Supply and fixing of top hamper on the existing pole complete including nut bolts etc as required. | | | |
| 17.20.12.1 | Vertical type | | | |
| 17.20.12.1.1 | 11 kV (.7m long) (65 x 65 x6mm angle) | Each | 7.00 | 177.00 |

| Code No | Description | Unit | Rate in Rs. | |
|--------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.20.12.1.2 | 11 kV(50 x 6 mm flat) | Each | 7.00 | 58.00 |
| 17.20.12.2 | Horizontal type | | | |
| 17.20.12.2.1 | 11 kV top hamper (65 x 65 x 6mm angle) | Each | 7.00 | 109.00 |
| 17.20.12.2.2 | 11 kV with double top hamper (65 x 65 x 6mm angle) | Each | 7.00 | 143.00 |
| 17.20.13 | Supply and fixing of Cross arms made out from 100 x 50 x 6mm MS channel complete in all respect as required including nuts and bolts and clamp as per Discom specification etc as required. | | | |
| 17.20.13.1 | 1.3 m long | Each | 8.00 | 390.00 |
| 17.20.13.2 | 2 x 1.3 m long | Each | 12.00 | 707.00 |
| 17.20.14 | Supply and fixing of 50 x 6mm MS strip having two holes of 5/8" dia with cut for providing 6/8 SWG GI wire. | | | |
| 17.20.14.1 | 80 mm long | Each | 1.00 | 6.00 |
| 17.20.14.2 | 100 mm long | Each | 1.00 | 8.00 |
| 17.20.15 | Supply and fixing of a set of 4 nos V cross arm made out of MS angle with bracing of MS flat 50 x 6 mm with nuts and bolts (as per specification of Discom) for 11 kV made up of 65 x 65 x6mm MS angle. | Each | 25.00 | 1261.00 |
| 17.20.16 | Supply and fixing of pilot patti made from MS flat (as per specification of Discom) and suitable for PCC pole (50 x 6mm)/ R.S. joist (50 x 6mm). | Each | 2.00 | 16.00 |
| 17.20.17 | Supply and fixing 11kV pin insulator(IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom). | Each | 6.00 | 108.00 |
| 17.20.18 | Supply and fixing 11kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom). | | | |
| 17.20.18.1 | B & S type hardware | Each | 6.00 | 426.00 |
| 17.20.18.2 | T & C type hardware | Each | 6.00 | 107.00 |
| 17.20.18.3 | B & S disc insulator | Each | 6.00 | 319.00 |
| 17.20.18.4 | T & C disc insulator | Each | 6.00 | 302.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.20.19 | Supply and fixing of PG clamps on overhead lines/jumpers, made of aluminium alloy 4600 of IS 617-1994 (with latest amendment if any) with steel nut and bolts conforming to IS 1363-1992 & IS 1367/1979-80 (with latest amendments if any) all ferrous metal parts intended for outdoor use except those made of stainless steel shall be protected by hotdip galvanising in accordance with IS 2633-1986 complete in all respect as required for ACSR conductor. | | | |
| 17.20.19.1 | Dog | Each | 5.00 | 42.00 |
| 17.20.19.2 | Weasel/Rabbit | Each | 5.00 | 31.00 |
| 17.20.19.3 | Racoon | Each | 5.00 | 40.00 |
| 17.20.20 | Supplying and laying earth conductor from electrode to source in ground/ floor/ wall on iron saddles etc as required including making connection duly soldered or crimped 7/3.15 mm hot dipped stay wire. | Mtr | 2.00 | 17.00 |
| 17.20.21 | Supplying and fixing of straight type 1.5 mtr long cross arms made out from MS angle of size 50 x 50 x 6mm for guarding on existing poles complete including 2 nos 150mm long MS flat of size 50 x 6mm bend into shape at both the ends duly welded clamps, nut and bolt etc as required. | Each | 10.00 | 257.00 |
| 17.20.22 | Supply and fixing of pillar box made of 2mm CRCA MS sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing.(400Amp capacity) | Each | 1500.00 | 20475.00 |
| 17.20.23 | Supply and fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hardware, fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI) | Each | 300.00 | 6050.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.20.24 | Supply and fixing of 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I toV) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom.(Type tested by ERDA/CPRI.) | Each | 500.00 | 13150.00 |
| 17.20.25 | Supply and fixing of distribution type Lightning arrestor 9 kV, 5 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI.) | Each | 200.00 | 2385.00 |
| 17.20.26 | Supply and fixing double pole structure for 11/0.4 Kv substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm as per Discom specifications. | Each | 500.00 | 8205.00 |
| 17.20.27 | Supply and fixing of 11 kV Danger plates as per specification of Discom on the existing poles complete in all respect as per Discom specification. | Each | 5.00 | 34.00 |
| 17.20.28 | Providing and fixing of single pole mounted structure set for isolator as per Discom specification complete in all respect with nuts and bolts as required MS flat 50 x 6mm, MS angle 65 x 65 x6mm, MS channel 100 x 50 x 6mm. (Excluding cost of pole). | Each | 200.00 | 2385.00 |
| 17.20.29 | Supply and erection of RS joist of 116 x 100 mm, 11Meter long with the welded/ bolted top hamper 65 x 65 x 6mm (0.7 Mtr long) making necessary arrangement for fixing 11 kV 'V' cross arm, LT bracket and guard wire bracket, grouted in ground 1/6 th of its length and fixed with cement, coarse and grit in 1:3:6 ratio in 1/5th of its length (40cm dia) from the bottom including two coats of aluminium paint over the complete length of joist. | Each | 500.00 | 9700.00 |
| 17.20.30 | Supplying and drawing of XLPE insulated LT bunched Aluminium conductor cable conforming to IS 14255/1995 and IS 398 (Pt-4)/ 1994 on existing cross arms through I hook with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification. | | | |
| 17.20.30.1 | 1X16 sq. mm. (insulated) | Mtr | 2.00 | 16.00 |
| 17.20.30.2 | 1 X 25 sq. mm. + 1X25 sq. mm. (Bared) | Mtr | 2.50 | 62.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.20.30.3 | 1 X 25 sq. mm. + 1X25 sq. mm. (insulated) | Mtr | 2.50 | 69.00 |
| 17.20.30.4 | 3 X 16 sq. mm. + 1X16 sq. mm. (Bared) | Mtr | 3.00 | 81.00 |
| 17.20.30.5 | 3 X 16 sq. mm. + 1X16 sq. mm. (insulated) | Mtr | 3.00 | 88.00 |
| 17.20.30.6 | 3 X 25 sq. mm. + 1X25 sq. mm. (Bared) | Mtr | 3.50 | 131.00 |
| 17.20.30.7 | 3 X 25 sq. mm. + 1X25 sq. mm. (insulated) | Mtr | 3.50 | 135.00 |
| 17.20.30.8 | 3 X 50 sq. mm. + 1X35 sq. mm. (Bared) | Mtr | 4.00 | 206.00 |
| 17.20.31 | P&F of thermoplastic/ PVC cable junction boxes (United/ HPL make) of following sizes including clamps for holding the box, cost of DIN rail for MCB mounting, connectors for cables terminals, threaded cable glands made of polyamide material etc. complete in all respect. | | | |
| 17.20.31.1 | 175mm X 150mm X100mm | Each | 20.00 | 700.00 |
| 17.20.31.2 | 300mm X 200mm X125mm | Each | 15.00 | 400.00 |

17.21 TRAFFIC SIGNALS

| Code No | Description | Unit | Rate in Rs. | |
|-----------|---|-------------|----------------|-----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.1 | SITC solid state multicycling type automatic electronic controller conforming to IS:7537 for traffic signals complete with electronic timer, control board, blinker unit for night operation, peak hour arrangement, synchronising. The unit shall be totally enclosed in 16 swg metal box including making connection of Keltron/ Shakti or approved make. | Each | 1500.00 | 37400.00 |
| 17.21.1.1 | 3 Phase automatic solid state controller | Each | 1500.00 | 36300.00 |
| 17.21.1.2 | 4 Phase automatic solid state controller | Each | 1500.00 | 37000.00 |
| 17.21.2 | SITC of microprocessor based logic type automatic electronic controller conforming to IS:7537 for traffic signals complete with electronic timer , control board, blinker unit for night operation and slip lane, day time peak hour operation, The controller shall have 12 Signal phases, 25 Signal plan, 24 cycle plan, 24 Signal split/ cycle, 4 Day plan, 32 Cycle switching/ day, 20 Selective Day plan/ annum, 16 Conflicting condition, 28 Signal Line, Solid-state relay switching, RS 422 Communication interphase, Manual override facility, up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronised operation. The controller unit shall be totally enclosed in 1.6 mm thick metal box including making connection of KELTRON (versa TMS model) or approved make. | Each | 7500.00 | 110000.00 |
| 17.21.2.1 | Add extra for upgrading the existing microprocessor based controller to vehicle actuated microprocessor controller | Each | | 50000.00 |
| 17.21.3 | P & F one aspect signal head assembly of MS consisting of signal head optical system with unbreakable polycarbonate colored lens, aluminium reflector, 100 watt GLS brass holder with bulb ,300 mm dia. Signal vision with required supports for overhead mounting on pole etc. complete in all respect including wiring with 1.5 sq.mm (IS:694) copper conductor and connection complete in all respect conforming to IS:7537 (with left/ right/ straight/ or any other marking stencils if required.) | Each | 100.00 | 1595.00 |

| Code No | Description | Unit | Rate in Rs. | |
|---------|---|------|-------------|----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.4 | P & F 4.5 mm thick M.S. traffic post with outer dia. 114.3mm, medium class and confirming to IS:1239 (P-I) 5 Mtr. Long (0.8 Mtr. below ground level) suitable for mounting the signal head assembly with weather proof fiber cap and M.S. base plate 300 mm x 300 mm x 6 mm including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from bottom of the pole and up to 30 cm. above the ground level and 40 cm dia. including painting with rubber paint below ground level and red oxide on exposed surface and finishing with traffic yellow enamel paint in two coats complete as required. | Each | 200.00 | 3705.00 |
| 17.21.5 | P & F solid state blinker caution unit with weather proof box and pole clips with flashing rate 40 - 60 flashes per minute. (Keltron/ Shakti or approved make) | Each | 100.00 | 2285.00 |
| 17.21.6 | P & F M.S. cantilever swaged pole suitable for mounting signal head assembly of overall height 9.0 Mtr. (1.5 meter. Below ground level) with M.S. base plate of size 400mm x 400mm x 7mm including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of the pole and up to 50cm above the ground level of 40 cm dia. Including painting with rubber coat below ground level and red oxide on exposed surface and finishing with two coats of traffic yellow enamel paint complete in all respect as required. The pole shall confirm following specifications as per IS: (1239 P-I) Top, middle, bottom length 1.80mtr, 3.60 Mtr., 6.0 Mtr. Respectively, outer dia. 88.9mm, 114.3mm, 139.7mm respectively, thickness 4.05mm, 4.5mm, 4.85mm respectively. | Each | 1200.00 | 11320.00 |
| 17.21.7 | S.I.T.C. of programmable three digit digital count down timer with 5mm dia. Red colored LEDs of high intensity (visible clearly at day time) of reputed make with digit size 150mm x 300mm approx. and quantity of LEDs be approx. 800 no.s including interconnection with traffic signal controller and housing the LED assembly in sheet metal box of size approx. 750mm x 550mm with detachable pole arms clamps etc. as required. | Each | 500.00 | 10000.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|--------------|---------------|----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.8 | S.I.T.C. of following colour retrofit LED matrices traffic light of modular size 300 mm dia. Covered with front clear acrylic sheet and back with aluminium body, InP/ InGaN based 5mm dia. coloured LEDs of ultra bright, super intensity (visible clearly at day time up to distance 300-600 meter , viewing angle of 30 degree). The unit shall be suitable for working on A.C. supply (160 - 240 V) and life cycle approx. 10 yrs with power consumption below 24 Watts , suitable for fast switching.(Makes - Binay, Keltron, Shakti, Bel or approved make) | | | |
| 17.21.8.1 | Red / Amber Round (Unit of 200-220NosLEDs) | Each | 100.00 | 3800.00 |
| 17.21.8.2 | Green Arrow(Unit of 120-130NosLEDs) | Each | 100.00 | 5500.00 |
| 17.21.8.3 | Red/Green pedestrian(Unit of 75-80NosLEDs) | Each | 100.00 | 2450.00 |
| 17.21.8.4 | Add extra for SITC of LED matrices with M.S. housing | Each | | 1150.00 |
| 17.21.9 | P , Laying &Jointing R.C.C. class NP-2 (Non pressure) pipes (IS:458) with collars. Jointed with cement mortar of ratio 1:2 including excavation etc. as required. | | | |
| 17.21.9.1 | 100 mm dia internal. | Mtr. | 20.00 | 118.00 |
| 17.21.9.2 | 150 mm dia internal. | Mtr. | 20.00 | 141.00 |
| 17.21.10 | P & F of bollard having Traffic Caution for road divider made of unbreakable polycarbonate sheet placed on suitable CC platform complete with 4 number FTL fitting (Philips make), Fitting protected with frame and wire mesh complete in all respect.(Keltron/ Shakti or approved make) | Each | 400.00 | 6000.00 |
| 17.21.11 | All in all maintenance to keep up of complete traffic signal system in working order at a crossing including controller, posts , head assembly, bulbs/LED reflector, material etc. , T&P as required. | | | |
| 17.21.11.1 | With solid-state controller & GLS Signal Heads | Month | | 1300.00 |
| 17.21.11.2 | With solid-state controller & LED Signal Heads | Month | | 400.00 |
| 17.21.11.3 | With microprocessor controller & GLS Signal Heads | Month | | 1800.00 |
| 17.21.11.4 | With microprocessor controller & LED Signal Heads | Month | | 550.00 |
| 17.21.11.5 | Only solid state controller | Month | | 300.00 |
| 17.21.12 | All in all maintenance to keep up blinker signal in working order at a crossing including controller, posts , head assembly, bulbs, reflector and material , T&P as required. | Month | | 450.00 |

| Code No | Description | Unit | Rate in Rs. | |
|----------|--|-------|-------------|----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.13 | All in all maintenance to keep up each electric traffic bollard in working order including material , T&P as required. | Month | | 120.00 |
| 17.21.14 | Refixing of standard traffic post including repair and transportation (within municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. including painting with rubber coat below ground level as required. | Each | | 600.00 |
| 17.21.15 | Refixing of cantilever traffic post including repair and transportation (within municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. including painting with rubber coat below ground level as required. | Each | | 2000.00 |
| 17.21.16 | Removing of existing damaged standard traffic post (incl. Signal head assembly) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required. | Each | | 300.00 |
| 17.21.17 | Removing of existing damaged cantilever traffic post (incl. Signal head) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required. | Each | | 1000.00 |
| 17.21.18 | Shifting of standard traffic post at same site including repair and transportation (within municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. including painting with rubber coat below ground level as required. | Each | | 600.00 |
| 17.21.19 | Shifting of cantilever traffic post at same site including repair and transportation (within municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. including painting with rubber coat below ground level as required. | Each | | 2000.00 |

| Code No | Description | Unit | Rate in Rs. | |
|--------------|--|------|-------------|----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.20 | Painting of existing traffic post /cantilever pole /signal head assembly/controller box including removing of old rusted surface paint and applying red oxide finishing two coats of enamel paint as required. | | | |
| 17.21.20.1 | Traffic post | Each | | 144.00 |
| 17.21.20.2 | Cantilever pole | Each | | 402.00 |
| 17.21.20.3 | Controller box | Each | | 115.00 |
| 17.21.20.4 | Signal head assembly 300 mm dia. | Each | | 40.00 |
| 17.21.20.5 | Signal head assembly 200 mm dia. | Each | | 34.00 |
| 17.21.21 | P & F of unbreakable polycarbonate colored lens of following size and colour. | | | |
| 17.21.21.1 | 200 mm, colored | Each | 10.00 | 250.00 |
| 17.21.21.2 | 200 mm, white | Each | 10.00 | 100.00 |
| 17.21.21.3 | 300 mm, colored | Each | 10.00 | 350.00 |
| 17.21.21.4 | 300 mm, white | Each | 10.00 | 150.00 |
| 17.21.22 | P & F of pole cap on existing pole complete in all respect. | | | |
| 17.21.22.1 | M.S. pole cap | Each | 20.00 | 200.00 |
| 17.21.22.2 | Fiber pole cap | Each | 20.00 | 225.00 |
| 17.21.23 | SITC of pelican controller for safety of pedestrians crossing the road at the push of button . Pedestrian stop vehicles flying on road and green period is 3 to 30 seconds. Pedestrian flashing green/ red pelican . (Keltron, Shakti or approved make) | Each | 500.00 | 20000.00 |
| 17.21.24 | Supply of spare card | | | |
| 17.21.24.1 | Controller card (Keltron, Shakti or approved make) | | | |
| 17.21.24.1.1 | Master card/ LLD card | Each | | 1000.00 |
| 17.21.24.1.2 | Phase cards up to 3 phase | Each | | 1000.00 |
| 17.21.24.1.3 | Power supply/ Blinker/ Monitor/ Safety trip unit | Each | | 2400.00 |
| 17.21.24.1.4 | Relay card | Each | | 7000.00 |
| 17.21.24.1.5 | Blinker card | Each | | 500.00 |
| 17.21.24.2 | Microprocessor Controller card (Keltron, Shakti or approved make) | | | |
| 17.21.24.2.1 | Microprocessor card | Each | | 15000.00 |
| 17.21.24.2.2 | Power supply card | Each | | 7500.00 |
| 17.21.24.2.3 | Keyboard card | Each | | 10000.00 |
| 17.21.24.2.4 | DB card | Each | | 5000.00 |

| Code No | Description | Unit | Rate in Rs. | |
|--------------|---|------|-------------|----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.25 | Supplying and drawing PVC insulated & sheathed solid/stranded copper conductor multi core control cable ISI marked (IS:1554) of 1.1 kV grade of approved make of Group2 as per chapter E11,in existing surface or recessed conduit/ casing capping including making connections etc. as required. | | | |
| 17.21.25.1 | 1.5 sq. mm. unarmoured | | | |
| 17.21.25.1.1 | 2 core | Each | 2.00 | 32.00 |
| 17.21.25.1.2 | 4 core | Each | 3.00 | 46.00 |
| 17.21.25.1.3 | 6 core | Each | 4.00 | 66.00 |
| 17.21.25.1.4 | 8 core | Each | 4.50 | 81.00 |
| 17.21.25.1.5 | 10 core | Each | 5.00 | 97.00 |
| 17.21.25.1.6 | 12 core | Each | 5.50 | 113.00 |
| 17.21.25.2 | 1.5 sq. mm. armoured | | | |
| 17.21.25.2.1 | 2 core | Each | 2.50 | 53.00 |
| 17.21.25.2.2 | 4 core | Each | 3.50 | 70.00 |
| 17.21.25.2.3 | 6 core | Each | 4.50 | 92.00 |
| 17.21.25.2.4 | 8 core | Each | 5.00 | 109.00 |
| 17.21.25.2.5 | 10 core | Each | 5.50 | 130.00 |
| 17.21.25.2.6 | 12 core | Each | 6.00 | 134.00 |
| 17.21.25.3 | 2.5 sq. mm. unarmoured | | | |
| 17.21.25.3.1 | 2 core | Each | 2.00 | 42.00 |
| 17.21.25.3.2 | 4 core | Each | 3.00 | 68.00 |
| 17.21.25.3.3 | 6 core | Each | 4.00 | 97.00 |
| 17.21.25.3.4 | 8 core | Each | 4.50 | 121.00 |
| 17.21.25.3.5 | 10 core | Each | 5.00 | 145.00 |
| 17.21.25.3.6 | 12 core | Each | 5.50 | 172.00 |
| 17.21.25.4 | 2.5 sq. mm. armoured | | | |
| 17.21.25.4.1 | 2 core | Each | 2.50 | 67.00 |

| Code No | Description | Unit | Rate in Rs. | |
|--------------|---|------|-------------|----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.25.4.2 | 4 core | Each | 3.50 | 93.00 |
| 17.21.25.4.3 | 6 core | Each | 4.50 | 125.00 |
| 17.21.25.4.4 | 8 core | Each | 5.00 | 154.00 |
| 17.21.25.4.5 | 10 core | Each | 6.00 | 171.00 |
| 17.21.25.4.6 | 12 core | Each | 7.00 | 195.00 |
| 17.21.26 | SITC of microprocessor / microcontroller based computerized traffic signal controller with built in CPU and non volatile RAM (data retention up to 10 years), provision for communication facility manual override facility, cable less /cabled interlinking for synchronization, weather proof, vandal proof, dust and splash proof powder coated steel cabinet ON/OFF switch, display for stage indication, count down indication, keyboard, auto/ manual switch, etc. complete in all respect with following specification. (CMS/ SHAKTI Make) | | | |
| 17.21.26.1 | 32/48 Signal output, 26 – 32 Signal Plans, 4-12 Day Plans, 32 – 48 Cycle switching, 16 –32 Conflict conditions, 24 Cycle plans | Each | 5000.00 | 60000.00 |
| 17.21.26.2 | 20/24 Signal output, 8 Signal Plans, 4 Day Plans, 10 – 12 Cycle switching, 16 Conflict conditions, 8 Cycle plans | Each | 4500.00 | 48000.00 |
| 17.21.27 | SITC of Crystal control Solar Road warning Blinker system with solar panel module with 300mm LED Module of minimum 190 Nos., Blinker Units, Charging circuit, suitable SMF Rechargeable Battery (12 Volt), including wiring, connections etc. complete in all respect | Each | 5000.00 | 15000.00 |
| 17.21.28 | SITC of Micro controller / Microprocessor based Pelican Traffic Controller with built in CPU and memory, solid state switching, capable of 8 signal plans and various modes of operation (actuated, automatic and flashing) with weather proof, vandal proof, dust & splash proof powder coated steel cabinet, push button switch, etc. complete in all respect (CMS / SHAKTI Make) | Each | 5000.00 | 15200.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|------|-------------|----------------|
| | | | Labour Rate | Completer Rate |
| 17.21.29 | SITC of following colour retrofit LED matrices traffic light of modular size 300mm Dia. Covered with front clear acrylic sheet and back with aluminum body, InP / InGaN based 5 mm Dia coloured LEDs of ultra bright, super intensity (visible clearly at day time up to distance 300 to 600 Meter, viewing angle of 23 degree). The unit shall be suitable for working on AC supply (160-240 Volt) and life cycle minimum 10 years with power consumption maximum 12 watts, suitable for fast switching (CMS / SHAKTI Make) | | | |
| 17.21.29.1 | RED / Amber Round Unit of 190 Nos. LEDs | Each | 5000.00 | 3200.00 |
| 17.21.29.2 | Green Round Unit of 66 Nos. LEDs | Each | 5000.00 | 4000.00 |

17.22 LOCAL AREA NETWORK

| Code No | Description | Unit | Rate in Rs. | | |
|-----------|---|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.22.1 | Supply , Drawing and Testing of 4 pair , 100 ohm, 24 AWG UTP E Cat 5 Cable as per latest ammendments of TIA /EIA 568 B.2 Specifications in existing MS/PVC Conduits including making connections to Information outlets and Patch Panels with ferruling at both ends for identification with necessary tools for punching, stripping, crimping and testing required . | Mtr. | 10.00 | 36.00 | 33.00 |
| 17.22.2 | Supply , Drawing and Testing of 4 pair, 24 AWG UTP Cat 6 Cable as per latest ammendments of TIA /EIA 568 B.2-1 Specifications in existing MS/PVC Conduits including making connections to Information outlets and Patch Panels with ferruling at both ends for identification with necessary tools for punching, stripping, crimping and testing required . | Mtr. | 10.00 | 50.00 | 46.00 |
| 17.22.3 | Supply and Installation of Information outlets made of high impact plastic bodyABS FR Grade with spring loaded collapsible shutters in jack Recess, suitable for Ecat 5 application complying to latest ammendments EIA/ TIA 568 B.2 specifications in existing modular /MS Boxes along with necessary connections as required. I/O's to have Terminator caps for toolless termination Single Outlet | EACH | 30.00 | 455.00 | 340.00 |
| 17.22.3.1 | Faceplate for Flush Mount Information Outlets Single Aperture with screw hole covers & Icon Tree Size 86mmX86mm | EACH | 25.00 | 123.00 | 111.00 |
| 17.22.3.2 | Faceplate for Flush Mount Information Outlets Dual Aperture with screw hole covers & Icon Tree Size 86mmX86mm | EACH | 25.00 | 134.00 | 123.00 |
| 17.22.3.3 | Faceplate for Flush Mount Information Outlets Quad Aperture with screw hole covers & Icon Tree Size 86mmX86mm | EACH | 25.00 | 146.00 | 134.00 |
| 17.22.4 | Supply and Installation of Information outlets made of high impact plastic bodyABS FR Grade with spring loaded collapsible shutters in jack Recess, suitable for Cat 6 application complying to latest ammendments EIA/ TIA 568 B.2-1 Specifications in existing modular /MS Boxes along with necessary connections as required. I/O's to have Terminator caps for toolless termination Single Outlet | EACH | 30.00 | 628.00 | 513.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------------|--|-------------|---------------|----------------|----------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.22.5 | Supply , Installation, Testing and Comissioning of Rack mounted 19", ECat 5 UTP,1.5-1.6 MM CRS chasis , powder coated Modular Patch Panels (upgradable to intelligent panels with use of sensor strips) with collapsible shutters on jacks to support latest ammendments of TIA / EIA ECat 5 Specifications in Existing Communication Rack along with necessary connections of ECat 5 UTP Cables, With Rear Cable management trays and clamps. | | | | |
| 17.22.5.1 | 6 Ports | EACH | 300.00 | 4000.00 | 3500.00 |
| 17.22.5.2 | 12 Ports | EACH | 400.00 | 5000.00 | 4500.00 |
| 17.22.5.3 | 18 Ports | EACH | 500.00 | 8000.00 | 6500.00 |
| 17.22.5.4 | 24 Ports | EACH | 600.00 | 9000.00 | 7500.00 |
| 17.22.6 | Supply , Installation, Testing and Comissioning of Rack mounted 19", Cat 6 UTP,1.5-1.6 MM CRS chasis , powder coated Modular Patch Panels (upgradable to intelligent panels with use of sensor strips) with collapsible shutters on jacks to support latest ammendments of TIA / EIA Cat 6 Specifications in Existing Communication Rack along with necessary connections of Cat 6 UTP Cables, With Rear Cable management trays and clamps. | | | | |
| 17.22.6.1 | 6 Ports | EACH | 300.00 | 5000.00 | 4500.00 |
| 17.22.6.2 | 12 Ports | EACH | 400.00 | 6000.00 | 5500.00 |
| 17.22.6.3 | 18 Ports | EACH | 500.00 | 8500.00 | 8000.00 |
| 17.22.6.4 | 24 Ports | EACH | 600.00 | 11000.00 | 9000.00 |
| 17.22.7 | Supply , Installation, Testing and Comissioning of Wall mounted , Ecat 5 UTP,3.15 MM aluminium chasis , powder coated Patch Panels with snap mount wall bracket to support latest ammendments of TIA / EIA Ecat 5 Specifications along with necessary connections of ECat 5 UTP Cables, 12 Ports | EACH | 400.00 | 5000.00 | 4500.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|---|-------------|----------------|-----------------|-----------------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.22.8 | Supply , Installation, Testing and Comissioning of Wall mounted Communication rack in two sections viz rear wall mount Section and hinged front section with glass doors, swing handles ,lock , Top and Bottom Cable entries,Supports for mounting rack on wall , Cable managers, Fan tray with 2 x 230 Volt fans, Equipment mounting hardware, wire managers , power supply box for supplying power to hubs, fans etc along with earth continuity kit, Mcb, indicator, moulded power supply cable, Blank panels , sliding shelves | | | | |
| 17.22.8.1 | 6 U(44 mm) wall mounted | EACH | 1500.00 | 16000.00 | 15000.00 |
| 17.22.8.2 | 9 U(44 mm) wall mounted | EACH | 1800.00 | 21000.00 | 19000.00 |
| 17.22.8.3 | 12 U(44 mm) wall mounted | EACH | 2000.00 | 25000.00 | 23500.00 |
| 17.22.8.4 | 15 U(44 mm) wall mounted | EACH | 2500.00 | 32000.00 | 30000.00 |
| 17.22.9 | Supply , Installation, Testing and Comissioning of Floor mounted Communication rack in two sections viz rear Steel Door and hinged front section with glass doors, swing handles ,lock on both doors, Top and Bottom Cable entries with gland plates ,Castor with brakes , 7 no Cable managers, 1 no Fan tray with 2 x 230 Volt fans, Equipment mounting hardware, wire managers , power supply box for supplying power to hubs, fans etc along with earth continuity kit, Mcb, indicator, moulded power supply cable, Blank panels of 1u / 2 u , sliding shelves .Frame of communication rack should be made of heavy grade Aluminum profile PS grey painted and panels should be made from CRCA steel 18 swg RS Beige painted . | | | | |
| 17.22.9.1 | 15 U (44 mm) Floor Standing Rack | EACH | 800.00 | 30000.00 | 28000.00 |
| 17.22.9.2 | 18 U (44 mm) Floor Standing Rack | EACH | 1000.00 | 36000.00 | 33000.00 |
| 17.22.9.3 | 22 U (44 mm) Floor Standing Rack | EACH | 1500.00 | 40000.00 | 38000.00 |
| 17.22.9.4 | 24 U (44 mm) Floor Standing Rack | EACH | 2000.00 | 48000.00 | 45000.00 |
| 17.22.9.5 | 27 U (44 mm)Floor Standing Rack | EACH | 2250.00 | 53000.00 | 50000.00 |
| 17.22.10 | Supply , Installation and Testing of 4 pair , 100 Ohm, 24 AWG , E Cat 5 UTP, flexible , Double ended Patch Cords along with 2 No of RJ 45 connectors with strain relief boots as per TIA /EIA 568 B.2 Specifications including making connections to Information outlets of lengths. | | | | |
| 17.22.10.1 | 1 Mtr/3 ft | EACH | 25.00 | 300.00 | 225.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|---------|---------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.22.10.2 | 2 Mtr / 7 ft | EACH | 25.00 | 360.00 | 275.00 |
| 17.22.10.3 | 3 Mtr / 10 ft. | EACH | 25.00 | 400.00 | 300.00 |
| 17.22.11 | Supply , Installation and Testing of 4 pair , 100 Ohm, 24 AWG , Cat 6 UTP, flexible , Double ended Patch Cords along with 2 No of RJ 45 connectors with strain relief boots as per TIA /EIA 568 B.2-1 Specifications including making connections to Information outlets of lengths. | | | | |
| 17.22.11.1 | 1 Mtr/3 ft | EACH | 25.00 | 350.00 | 275.00 |
| 17.22.11.2 | 2 Mtr / 7 ft | EACH | 25.00 | 400.00 | 325.00 |
| 17.22.11.3 | 3 Mtr / 10 ft. | EACH | 25.00 | 450.00 | 375.00 |
| 17.22.12 | Supply , Drawing and Testing of Indoor multimode[62.5/125um] glass Fiber Optic Cable as per latest ammendments of TIA /EIA 568B.3 , GR 409 CORE / UL listed NEC 770 Standards in existing MS/PVC Conduits/ slotted channels including making Terminations to active passive equipments with ferruling at both ends for identification with necessary tools for Terminations and testing required . | | | | |
| 17.22.12.1 | 4 fiber | Mtr. | 30.00 | 400.00 | 325.00 |
| 17.22.12.2 | 6 Fiber | Mtr. | 40.00 | 450.00 | 375.00 |
| 17.22.13 | Supply , Drawing and Testing of Outdoor, steel tape armoured multimode[62.5/125um] glass Fiber Optic Cable as per latest ammendments of TIA /EIA 568B.3 , GR 20 CORE / UEC 794-1/ EN 187000 Standards in existing MS/PVC Conduits/ hume pipe including making terminations to active passive equipments with ferruling at both ends for identification with necessary tools for Terminations and testing required . | | | | |
| 17.22.13.1 | 4 fiber | Mtr. | 40.00 | 450.00 | 375.00 |
| 17.22.13.2 | 6 Fiber | Mtr. | 60.00 | 500.00 | 425.00 |
| 17.22.14 | Supply ,Installation and Testing of indoor 1 pair multimode [62.5/125um] glass Fiber Optic Patch Cords of One mtr length as per latest ammendments of TIA /EIA 568B.3 and IEC 794 Standard Specifications including ST II / SC/FC/MT/PC connectors at both ends as per requirements . | EACH | 25.00 | 4500.00 | 4000.00 |

| Code No | Description | Unit | Rate in Rs. | | |
|------------|--|------|-------------|----------|----------|
| | | | Labour Rate | Group-1 | Group-2 |
| 17.22.15 | Supply , Termination and Testing of Epoxy/ epoxyless ST II / SC/ FC/ MT/ PC connectors for indoor /out door multimode glass Fiber Optic Cable with necessary tools for Terminations and testing required . | EACH | 1500.00 | 2500.00 | 2200.00 |
| 17.22.16 | Supply ,Installation and Testing of 19 " Rack mounted/ surface mounted aluminium / CRS powder coated multimode glass Fiber Optic Cable Patch panel/ LIU (upgradable to intelligent panels with use of sensor strips) along with cable tray/ fiber management system , adapters for ST II/ SC/FC/MT/PC connections including making connections (Terminations if required will be paid seperately) to active / passive equipments with ferruling at both ends for identification with necessary tools for Terminations and testing required . | | | | |
| 17.22.16.1 | 8 Ports | EACH | 100.00 | 6000.00 | 5500.00 |
| 17.22.16.2 | 12 Ports | EACH | 125.00 | 7500.00 | 7000.00 |
| 17.22.16.3 | 24 Ports | EACH | 250.00 | 14000.00 | 13000.00 |
| 17.22.16.4 | 36 Ports | EACH | 300.00 | 22000.00 | 20000.00 |

17.23 HIRE CHARGES FOR PA SYSTEM & TEMPORARY LIGHTING

| Code No | Description | Rate in Rs. | |
|-----------|--|-------------|----------------------|
| | | Unit | Labour Complete Rate |
| 17.23.1 | Hire charges of public address system for a important public function with 5/ 6 no. of microphones with following nos of stand Hi Fi box, speakers/ Horns, stand by amplifiers , battery backup complete including transportation etc. as required : (At district Head Quarters) | | |
| 17.23.1.1 | 4 Nos 3 Way Big Box Speakers,(upto 5000 audiences) | Job p.day | 4500.00 |
| 17.23.1.2 | 6 Nos 3 Way Big Box Speakers,(above 5000 to 10000 audiences) | Job p.day | 8500.00 |
| 17.23.1.3 | 8 Nos 3 Way Big Box Speakers,(above 10000 to 25000 audiences) | Job p.day | 15000.00 |
| 17.23.1.4 | 10 Nos 3 Way Big Box Speakers,(above 25000 audiences) | Job p.day | 20000.00 |
| 17.23.1.5 | With 5/6 Mikes, 15 to 20 nos. reflex horns (upto 25000 audiences) | Job p.day | 1100.00 |
| 17.23.1.6 | With 5/6 Mikes, 25-30 nos. reflex horns (above 25000 audiences) | Job p.day | 3500.00 |
| | Note: Add 35% out side district head quarters | | |
| 17.23.2 | Hire charges for table microphone (Delegate type) | Each p.day | 140.00 |
| 17.23.3 | Hire charges for clip microphone with long lead lavilier | Each p.day | 150.00 |
| 17.23.4 | Hire charges for collar cordless microphone with long lead lavilier | Each p.day | 500.00 |
| 17.23.5 | Hire charges for public address system consisting of 2 Microphone with stand, Battery Backup, Amplifier,2 Loudspeakers etc as reqd. | Job p.day | 1100.00 |
| 17.23.6 | Hire charges for 2 nos. 3 way Bigbox speakers with 5/6 Microphones, mixer, echo chamber, Amplifier, Battery back up etc as reqd for Musical programme | Job p.day | 3500.00 |
| 17.23.7 | Hire charges for extra battery of 12 V , 125 AH | Each p.day | 50.00 |
| 17.23.8 | Hire charges for 500/1000 Watt halogen flood luminaire as required.(with Lamp) | | |
| 17.23.8.1 | With suitable pole | Each p.day | 40.00 |

| Code No | Description | Rate in Rs. | |
|------------|---|-------------|----------------------|
| | | Unit | Labour Complete Rate |
| 17.23.8.2 | With out pole | Each p.day | 25.00 |
| 17.23.9 | Hire charges for HPMV / HPSV post top lantern upto 250 watt with lamp & pole as required. | Each p.day | 70.00 |
| 17.23.10 | Hire charges for light point with lamp.asrequired for shops/ stalls | Each p.day | 5.00 |
| 17.23.11 | Hire charges for power/light plug on board as requiredfor shops/ stalls | Each p.day | 35.00 |
| 17.23.12 | Hire charges for Jhalar bulb15/25 watt coloured/clear asrequired. | Each p.day | 3.00 |
| 17.23.13 | Hire charges for 60 nos. 6.2 v miniature bulb asrequired. | Each p.day | 12.00 |
| 17.23.14 | Hire charges of niwar patti 60 no. 6.2 v miniature lamps. As required. | Each p.day | 20.00 |
| 17.23.15 | Hire charges for tube light fixture with 40 watt FTL as required. | Each p.day | 15.00 |
| 17.23.16 | Hire charges of Main service line for 3 phase connection upto 50 mtr. Length including meter board, dist. Board and supports as required. | | |
| 17.23.16.1 | Upto 25.0 sq.mm size cable | p week | 300.00 |
| 17.23.16.2 | above 25.0 sq.mm & upto 95 Sq.mm | p week | 500.00 |
| 17.23.16.3 | above95.0 sq.mm | p week | 700.00 |
| 17.23.17 | Hire charges of Sub service line for single/ three phase connection upto 30 mtr. Length including dist. Board and supports as required | | |
| 17.23.17.1 | Single phase upto 6 Sqmm | p week | 125.00 |
| 17.23.17.2 | Three phase & neutral upto 10 Sqmm | p week | 150.00 |
| 17.23.18 | Hire charges for cut glass chendilier of 20 lamps | Each p.day | 500.00 |
| 17.23.19 | Hire charges for cut glass chendilier of 15 lamps | Each p.day | 300.00 |
| 17.23.20 | Hire charges for cut glass chendilier of 7 lamps | Each p.day | 100.00 |
| 17.23.21 | Hire charges for pendant of cut glass with single 200 watt lamp as required. | Each p.day | 15.00 |
| 17.23.22 | Hire charges for 250/400 watt metal halide luminaire with lamp and pole of required height as required. | Each p.day | 100.00 |

| Code No | Description | Rate in Rs. | |
|------------|--|---------------|----------------------|
| | | Unit | Labour Complete Rate |
| 17.23.23 | Hire charges for D.G. Set including POL, Operator ,change over switch. Control panel etc. as required.of following capacity: | | |
| 17.23.23.1 | Upto 10 KVA | Each p.day | 1500.00 |
| 17.23.23.2 | 40 / 62.5 KVA | Each p.day | 3500.00 |
| 17.23.23.3 | Above 40 KVA and upto 62.5 KVA | Each p.day | 3500.00 |
| 17.23.23.4 | Above 62.5 KVA and upto 125 KVA | Each p.day | 5500.00 |
| 17.23.24 | Hire charges for Desert cooler of size 20" fan with stand, wiring including filling of water | Each p.day | 100.00 |
| 17.23.25 | Hire charges for pedestal fan of size 18" / ceiling fan of size 48" sweep as required. | Each p.day | 40.00 |
| 17.23.26 | Hire charges for spot /palican lights (1000 watt) for stage function with dimmer as required. | Each p.day | 350.00 |
| 17.23.27 | Hire charges for colour effect scanners for stage functions as required. | Each p.day | 1500.00 |
| 17.23.28 | Hire charges for jumbo strove light for stage functions as required. | Each p.day | 1000.00 |

Note: Rate for subsequent days / week will be 50% of the original rates

17.24 REPAIRING OF FANS COOLERS, PUMPS, MOTORS, FRIDGES AND AIRCONDITIONERS

| Code No | Description | Unit | Rate in Rs. | |
|-----------|--|-------------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.24.1 | Rewinding of ceiling fan motor (starting and running winding) including all necessary material. The motor is to be wound taking no. of coils, turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. (New model ceiling fan) | | | |
| 17.24.1.1 | 900/1200 mm sweep | Each | | 242.00 |
| 17.24.1.2 | 1400 mm sweep | Each | | 308.00 |
| 17.24.1.3 | 1500 mm sweep | Each | | 319.00 |
| 17.24.2 | Labour charges for removing and refixing of Ceiling fan/ Exhaust fan from site | Each | | 33.00 |
| 17.24.2.1 | Charges for oiling, greasing, overhauling of ceiling fan, table fan, pedestal fan irrespect to the size of fan including removing,refixing of fan from site and testing etc. as required. | Each | | 55.00 |
| 17.24.2.2 | Providing and Replacement of ball bearing of ceiling/ exhaust fan as required. (NBC/ SKF) | Each | | 82.00 |
| 17.24.2.3 | Providing & Replacement of M.S. Shaft of ceiling fan. | Each | | 88.00 |
| 17.24.2.4 | P & Replacement of cover/ bearing seat of ceiling/ exhaust fan. | Each | | 88.00 |
| 17.24.2.5 | P & F Aluminium Blades (a set of 3 blades) duly painted and well finished 900/ 1200 mm | Each | | 176.00 |
| 17.24.2.6 | P & F Aluminium Blades (a set of 3 blades) duly painted/ powder coated. (1400/ 1500 mm) | Each | | 209.00 |
| 17.24.2.7 | P & F of rubber gromet (fan insulator) | Each | | 6.00 |
| 17.24.2.8 | Providing and Replacement of Gun metal bush of ceiling/exhaust/cooler fan/ as required. | Each | | 55.00 |
| 17.24.3 | Desert Cooler | | | |
| 17.24.3.1 | 3 Speed rotary switch for Desert Cooler | Each | | 36.00 |
| 17.24.3.2 | P & Replacement of M.S. Shaft of fan motor for Desert Cooler/ exhaust fan. | Each | | 72.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.24.3.3 | P & replacement of supporting legs(4 no.) of vertical pump of desert cooler as required for Desert Cooler/ exhaust fan. | Each | | 22.00 |
| 17.24.3.4 | P & F of stud with nuts and washer for Desert Cooler/ exhaust fan. | Each | | 16.00 |
| 17.24.3.5 | Servicing and overhauling of 20" sweep desert cooler including oiling, greasing, painting of tank from inside with rubber paint after properly desmantling each assembly and refixing the same as required. | Each | | 55.00 |
| 17.24.3.6 | Painting of desert cooler with two coats of rubber paint inside of water tank and two coat of synthetic enamelled paint on both side of cooler body, fan body, grills etc.after cleaning with sand paper, complete in all respect as required. | Each | | 275.00 |
| 17.24.3.7 | Replacement of cooler pads (heavy) set of 3 no. of size 25" x 27" | Each | | 38.00 |
| 17.24.3.8 | P & F Brass float valve of weighing approx. 250 gm, 8" long rod,PVC ball of 4" dia. For desert coler as required. | Each | | 88.00 |
| 17.24.3.9 | P & F adjustable M.S.grill 20/22 gauge of size approx. 24" x 26" including painting etc. as required. | Each | | 187.00 |
| 17.24.3.10 | P & F aluminium blade for 20" desert cooler fan as required. | Each | | 110.00 |
| 17.24.3.11 | P & F outer/inner threaded PVC nipple 1/2" dia and 2" long | Each | | 10.00 |
| 17.24.3.12 | P & Replacement of pvc pipe for vertical pump of desert cooler as required. | Each | | 11.00 |
| 17.24.3.13 | P & replacement of shaft for vertical pump of desert cooler as required. | EACH | | 28.00 |
| 17.24.3.14 | Spray painting of ceiling fan of size 900/1200/ 1400/ 1500 mm with two coats of white/ brown enamelled paint after cleaning with sand paper. Filling etc. as required. | Each | | 121.00 |
| 17.24.3.15 | P & replacement of 4 nos. supporting legs of 20" fan motor with rubber pads of desert cooler as required. | Each | | 22.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|---------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.24.3.16 | P & replacement of high quality pvc distribution ' T 'and 3 no. elbow for cooler | Each | | 16.00 |
| 17.24.3.17 | P & F ISI marked commercial plywood 4.0 mm thick including cutting, hardwares etc. as required. | SQ.Mtr. | | 165.00 |
| 17.24.3.18 | Labour Charges for fixing of desert cooler in windows including handling of cooler upto desired location, making electrical/water connection ,testing etc. as required. | | | |
| 17.24.3.19 | Ground floor | Each | 60.00 | |
| 17.24.3.20 | First floor | Each | 70.00 | |
| 17.24.3.21 | Second floor | Each | 80.00 | |
| 17.24.3.22 | P & F Vertical Pump suitable for 20" desert cooler including making connection testing etc. as required. | | | |
| 17.24.3.23 | CG/ COO LHOME / KHAITAN make | Each | | 495.00 |
| 17.24.3.24 | ISI marked vertical pump | Each | | 385.00 |
| 17.24.3.25 | submercible pump (Millborn/ Wonder make) | Each | | 150.00 |
| 17.24.3.26 | P & F fan motor suitable for 20" desert cooler including making connection testing etc. as required. | | | |
| 17.24.3.27 | CG/ COOLHOME/ KHAITAN fan motor make | Each | | 1320.00 |
| 17.24.3.28 | ISI marked fan motor | Each | | 990.00 |
| 17.24.4 | Rewinding of Heavy duty Exhaust fan motor including all necessary material,The motor is to be wound taking no. of coils,turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. | | | |
| 17.24.4.1 | 300/ 380 mm sweep | Each | | 358.00 |
| 17.24.4.2 | 457 mm sweep | Each | | 412.00 |
| 17.24.4.3 | 600 mm sweep | Each | | 825.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-----------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.24.5 | Rewinding of 400 mm table fan/pedestal fan motor including all necessary material,The motor is to be wound taking no. of coils,turnsand pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. | Each | | 214.00 |
| 17.24.6 | Rewinding of single phase motor of 1400 RPM including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. | | | |
| 17.24.6.1 | 0.25 H.P. To 0.50 H.P. | Each | | 412.00 |
| 17.24.6.2 | 0.75 H.P. To 1.0 H.P. | Each | | 660.00 |
| 17.24.6.3 | 2.0 H.P. | Each | | 770.00 |
| 17.24.7 | Rewinding of three phase squirrel cage induction motor of 1400 to 2800 RPM including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. | | | |
| 17.24.7.1 | 3.0 H.P. | Each | | 990.00 |
| 17.24.7.2 | 5.0 H.P. | Each | | 1320.00 |
| 17.24.7.3 | 7.5 H.P. | Each | | 1540.00 |
| 17.24.7.4 | 10.0 H.P. | Each | | 1815.00 |
| 17.24.7.5 | 12.5 H.P. | Each | | 2090.00 |
| 17.24.7.6 | 15.0 H.P. | Each | | 2640.00 |
| 17.24.8 | Rewinding of motor of desert cooler pump with super enamelled copper wire, 'E ' class insulation material including removing,refixing,testing etc. as required. | Each | | 126.00 |
| 17.24.9 | Rewinding of motor of desert cooler fan with super enamelled copper wire, 'E ' class insulation material including removing,refixing,testing etc. as required. | Each | | 358.00 |
| 17.24.10 | Providing and replacement of winding kit of blower type heat convector. As required. | Each | | 110.00 |
| 17.24.11 | Providing and replacement of heating element of blower type heat convector. As required. | Each | | 99.00 |
| 17.24.12 | Providing and replacement of heating element rod of radiation type heat convector as required. | Each | | 82.00 |

| Code No | Description | Unit | Rate in Rs. | |
|------------|--|-------------|-------------|----------------|
| | | | Labour Rate | Complete Rate |
| 17.24.13 | Providing and replacement of Superior quality Chrome plated reflector of radiation type heat convector. As required. | | | |
| 17.24.13.1 | single rod | Each | | 110.00 |
| 17.24.13.2 | double rod | Each | | 138.00 |
| 17.24.14 | Supplying and charging of fresh refrigerant and testing of performance of air conditioner/ fridge/ water cooler of following capacity including capillary and strainer/ filter. | | | |
| 17.24.14.1 | 1.0 TR Window/ Split A.C. | Each | | 1980.00 |
| 17.24.14.2 | 1.5 TR Window/ Split A.C. | Each | | 2200.00 |
| 17.24.14.3 | 2.0 TR Window/ Split A.C. | Each | | 2475.00 |
| 17.24.14.4 | 25/50 / 40/80 Ltr. Water cooler | Each | | 1716.00 |
| 17.24.14.5 | 60/120 Ltr. Water cooler | Each | | 1980.00 |
| 17.24.14.6 | 150/150 Ltr. Water cooler | Each | | 2200.00 |
| 17.24.14.7 | 165 Ltr Refrigerator | Each | | 924.00 |
| 17.24.14.8 | 200/210 Ltr Refrigerator | Each | | 1320.00 |
| 17.24.14.9 | 286/310 Ltr Refrigerator | Each | | 1584.00 |
| 17.24.15 | Replacement of defective compressor by company repaired compressor of fridge/A.C./water cooler including testing etc. as required. (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas) | | | |
| 17.24.15.1 | 1.0 TR A.C. | Each | | 7260.00 |
| 17.24.15.2 | 1.5 TR A.C. | Each | | 7920.00 |
| 17.24.15.3 | 2.0 TR A.C. | Each | | 9900.00 |
| 17.24.15.4 | 25/50 / 40/80 Ltr. Water cooler | Each | | 4510.00 |
| 17.24.15.5 | 60/120 Ltr. Water cooler | Each | | 5775.00 |
| 17.24.15.6 | 150/150 Ltr. Water cooler | Each | | 6468.00 |
| 17.24.15.7 | 165 Ltr Refrigerator (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas/ BPL/ Zenith/ Kelvinator) | Each | | 2376.00 |
| 17.24.15.8 | 200/210 Ltr Refrigerator (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas/ BPL/ Zenith/ Kelvinator) | Each | | 2860.00 |
| 17.24.15.9 | 286/310 Ltr Refrigerator (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas/ BPL/ Zenith/ Kelvinator) | Each | | 3135.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.24.16 | P & Replacement of condensing/ cooling coil of copper fins for following capacity A.C./ Water cooler/ Fridge as required. | | | |
| 17.24.16.1 | 1.0 TR A.C. | Each | | 2365.00 |
| 17.24.16.2 | 1.5 TR A.C. | Each | | 2640.00 |
| 17.24.16.3 | 2.0 TR A.C. | Each | | 2860.00 |
| 17.24.16.4 | 25/50 / 40/80 Ltr. Water cooler | Each | | 1650.00 |
| 17.24.16.5 | 60/120 Ltr. Water cooler | Each | | 2640.00 |
| 17.24.16.6 | 150/150 Ltr. Water cooler | Each | | 2640.00 |
| 17.24.16.7 | 165 Ltr Refrigerator | Each | | 715.00 |
| 17.24.16.8 | 200/210 Ltr Refrigerator | Each | | 880.00 |
| 17.24.16.9 | 286/310 Ltr Refrigerator | Each | | 1155.00 |
| 17.24.16.10 | Servicing of 1.0/1.5/2.0 TR capacity air conditioner after dismanteling | Each | | 528.00 |
| 17.24.16.11 | P & Replacement of overload protection of A.C./ Water cooler as required. | Each | | 330.00 |
| 17.24.16.12 | P & Replacement of thermostat of A.C./ Water cooler/fridge as required. | Each | | 330.00 |
| 17.24.16.13 | P & Replacement of selector switch of 1.0/1.5/2.0 TR A.C Fan as required. | Each | | 99.00 |
| 17.24.16.14 | P & Replacement of starting relay of A.C/water cooler/fridge compressor as required. | Each | | 370.00 |
| 17.24.16.15 | P & Replacement of door liner of 165/200 Ltr. Fridge as required | Each | | 742.00 |
| 17.24.16.16 | P & Replacement of door liner of 286/310 Ltr. Fridge as required | Each | | 1100.00 |
| 17.24.16.17 | P & Replacement of main liner of 165/200 Ltr. Fridge as required | Each | | 1485.00 |
| 17.24.16.18 | P & Replacement of main liner of 286/310 Ltr. Fridge as required | Each | | 1925.00 |
| 17.24.16.19 | P & Replacement of door gasket of 165/200 Ltr. Fridge as required | Each | | 182.00 |
| 17.24.16.20 | P & Replacement of door gasket of 286/310 Ltr. Fridge as required | Each | | 308.00 |
| 17.24.16.21 | P & Replacement of PVC/ acrylic vegetable basket of 165/200 Ltr. Fridge as required | Each | | 275.00 |

| Code No | Description | Unit | Rate in Rs. | |
|--------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.24.16.22 | P & Replacement of PVC/acrylic vegetable basket of 286/310 Ltr. Fridge as required | Each | | 330.00 |
| 17.24.16.23 | P & Replacement of glass/acrylic cover for vegetable basket of 165/200 Ltr. Fridge as required | Each | | 187.00 |
| 17.24.16.24 | P & Replacement of glass/acrylic cover for vegetable basket of 286/310 Ltr. Fridge as required | Each | | 220.00 |
| 17.24.16.25 | P & Replacement of p.v.c./acrylic bottle supporter of 165/200/ 286/310 Ltr. Fridge as required | Each | | 82.00 |
| 17.24.16.26 | P & Replacement of aluminium bottle supporter of 165/200/ 286/310 Ltr. Fridge as required | Each | | 82.00 |
| 17.24.16.27 | P & Replacement of p.v.c./acrylic freezer door of 165/200 Ltr. Fridge as required | Each | | 220.00 |
| 17.24.16.28 | P & Replacement of p.v.c./acrylic freezer door of 286/310 Ltr. Fridge as required | Each | | 264.00 |
| 17.24.16.29 | P & Replacement of door handle of 165/200/286/310 Ltr. Fridge as required | Each | | 176.00 |
| 17.24.16.30 | P & Replacement of lamp of Fridge as required | Each | | 22.00 |
| 17.24.16.31 | P & Replacement of p.v.c./acrylic chiller tray of 165/200 Ltr. Fridge as required | Each | | 248.00 |
| 17.24.16.32 | P & Replacement of p.v.c./acrylic chiller tray of 286/310 Ltr. Fridge as required | Each | | 231.00 |
| 17.24.16.33 | P & Replacement of fridge lock complete as required | Each | | 154.00 |
| 17.24.16.34 | Spray painting of complete fridge (inside and outside) of 165/ 200 Ltr. Capacity. | Each | | 1045.00 |
| 17.24.16.35 | Spray painting of complete fridge (inside and outside) of 286/310 Ltr. Capacity. | Each | | 1045.00 |
| 17.24.16.36 | P & Replacement of fan motor of evaporator/ condensor complete as required | Each | | 1650.00 |
| 17.24.17 | S & F of capacitor of 230V/ 275V, 50Hz rating of Usha/ Punsumi/ Priya/ Capital/ JEC/ AMCAP/ CONCAP make | | | |
| 17.24.17.1 | Starting capacitor | | | |
| 17.24.17.1.1 | 20-30 micro farad | Each | | 132.00 |

| Code No | Description | Unit | Rate in Rs. | |
|--------------|----------------------|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.24.17.1.2 | 40-60 micro farad | Each | | 165.00 |
| 17.24.17.1.3 | 60-80 micro farad | Each | | 220.00 |
| 17.24.17.1.4 | 80-100 micro farad | Each | | 275.00 |
| 17.24.17.1.5 | 100-120 micro farad | Each | | 286.00 |
| 17.24.17.1.6 | 120-150 micro farad | Each | | 330.00 |
| 17.24.17.2 | Running capacitor | | | |
| 17.24.17.2.1 | 2.5/3.15 micro farad | Each | | 35.00 |
| 17.24.17.2.2 | 4.0 micro farad | Each | | 44.00 |
| 17.24.17.2.3 | 6.0 micro farad | Each | | 66.00 |
| 17.24.17.2.4 | 8.0 micro farad | Each | | 77.00 |
| 17.24.17.2.5 | 10.0 micro farad | Each | | 110.00 |
| 17.24.17.2.6 | 15.0 micro farad | Each | | 143.00 |
| 17.24.17.2.7 | 25.0 micro farad | Each | | 248.00 |

Note The Components to be replaced of unit under repair, shall be guided as per guidelines of manufacturer of unit

17.25 ELECTRICAL MOTOR

| Code No. | Description | Unit | Rate in Rs. | |
|------------|--|-------------|-------------|-----------|
| | | | Labour Rate | Supply |
| 17.25.1 | TEFC,IP-55,415 Volts Squirrel cage Induction Motors confirming to IS-325 of the following rating | | | |
| | Pole | Rating (KW) | | |
| 17.25.1.1 | 2 Pole | 0.18 | 205.59 | 2736.38 |
| 17.25.1.2 | 2 Pole | 0.37 | 213.15 | 2836.98 |
| 17.25.1.3 | 2 Pole | 0.55 | 256.89 | 3419.22 |
| 17.25.1.4 | 2 Pole | 0.75 | 277.20 | 3689.58 |
| 17.25.1.5 | 2 Pole | 1.10 | 300.73 | 4002.71 |
| 17.25.1.6 | 2 Pole | 1.50 | 338.24 | 4501.95 |
| 17.25.1.7 | 2 Pole | 2.20 | 443.39 | 5901.57 |
| 17.25.1.8 | 2 Pole | 3.70 | 504.05 | 6708.90 |
| 17.25.1.9 | 2 Pole | 5.50 | 857.22 | 11409.54 |
| 17.25.1.10 | 2 Pole | 7.50 | 951.22 | 12660.78 |
| 17.25.1.11 | 2 Pole | 9.30 | 1488.25 | 19808.56 |
| 17.25.1.12 | 2 Pole | 11.00 | 1581.59 | 21051.00 |
| 17.25.1.13 | 2 Pole | 15.00 | 1831.96 | 24383.44 |
| 17.25.1.14 | 2 Pole | 18.50 | 2340.36 | 31150.19 |
| 17.25.1.15 | 2 Pole | 22.00 | 2783.94 | 37054.28 |
| 17.25.1.16 | 2 Pole | 30.00 | 3937.26 | 52404.91 |
| 17.25.1.17 | 2 Pole | 37.00 | 4993.07 | 66457.77 |
| 17.25.1.18 | 2 Pole | 45.00 | 6174.54 | 82183.14 |
| 17.25.1.19 | 2 Pole | 55.00 | 8906.61 | 118547.04 |
| 17.25.1.20 | 2 Pole | 75.00 | 10566.91 | 140645.56 |
| 17.25.1.21 | 2 Pole | 90.00 | 12394.72 | 164973.67 |
| 17.25.1.22 | 4 Pole | 0.18 | 210.78 | 2805.54 |
| 17.25.1.23 | 4 Pole | 0.25 | 219.48 | 2921.23 |
| 17.25.1.24 | 4 Pole | 0.55 | 250.94 | 3339.99 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|---------------|-------|-------------|-----------|
| | | | Labour Rate | Supply |
| 17.25.1.25 | 4 Pole | 0.55 | 273.33 | 3638.02 |
| 17.25.1.26 | 4 Pole | 1.10 | 306.30 | 4076.90 |
| 17.25.1.27 | 4 Pole | 1.50 | 355.24 | 4728.30 |
| 17.25.1.28 | 4 Pole | 2.20 | 448.31 | 5966.96 |
| 17.25.1.29 | 4 Pole | 3.70 | 608.26 | 8095.96 |
| 17.25.1.30 | 4 Pole | 5.50 | 827.64 | 11015.93 |
| 17.25.1.31 | 4 Pole | 7.50 | 1001.30 | 13327.27 |
| 17.25.1.32 | 4 Pole | 9.30 | 1445.92 | 19245.19 |
| 17.25.1.33 | 4 Pole | 11.00 | 1530.48 | 20370.67 |
| 17.25.1.34 | 4 Pole | 15.00 | 1887.14 | 25117.84 |
| 17.25.1.35 | 4 Pole | 18.50 | 2770.81 | 36879.48 |
| 17.25.1.36 | 4 Pole | 22.00 | 2968.56 | 39511.49 |
| 17.25.1.37 | 4 Pole | 30.00 | 3903.15 | 51950.94 |
| 17.25.1.38 | 4 Pole | 37.00 | 5142.16 | 68442.15 |
| 17.25.1.39 | 4 Pole | 45.00 | 5600.48 | 74542.41 |
| 17.25.1.40 | 4 Pole | 55.00 | 8525.20 | 113470.40 |
| 17.25.1.41 | 4 Pole | 75.00 | 10941.52 | 145631.65 |
| 17.25.1.42 | 4 Pole | 90.00 | 11914.95 | 158587.95 |
| 17.25.1.43 | 6 Pole | 0.37 | 299.22 | 3982.59 |
| 17.25.1.44 | 6 Pole | 0.55 | 281.17 | 3742.40 |
| 17.25.1.45 | 6 Pole | 0.75 | 330.30 | 4396.31 |
| 17.25.1.46 | 6 Pole | 1.10 | 379.81 | 5055.26 |
| 17.25.1.47 | 6 Pole | 1.50 | 474.48 | 6315.30 |
| 17.25.1.48 | 6 Pole | 2.20 | 623.76 | 8302.19 |
| 17.25.1.49 | 6 Pole | 3.70 | 874.13 | 11634.64 |
| 17.25.1.50 | 6 Pole | 5.50 | 994.59 | 13237.98 |
| 17.25.1.51 | 6 Pole | 7.50 | 1630.06 | 21696.11 |
| 17.25.1.52 | 6 Pole | 9.30 | 1928.71 | 25671.15 |
| 17.25.1.53 | 6 Pole | 11.00 | 1984.74 | 26416.86 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|-------------|-------|-------------|-----------|
| | | | Labour Rate | Supply |
| 17.25.1.54 | 6 Pole | 15.00 | 2937.76 | 39101.53 |
| 17.25.1.55 | 6 Pole | 18.50 | 3758.60 | 50026.93 |
| 17.25.1.56 | 6 Pole | 22.00 | 4167.88 | 55474.53 |
| 17.25.1.57 | 6 Pole | 30.00 | 5267.16 | 70105.85 |
| 17.25.1.58 | 6 Pole | 37.00 | 8770..7 | 116733.69 |
| 17.25.1.59 | 6 Pole | 45.00 | 10593.84 | 141003.95 |
| 17.25.1.60 | 6 Pole | 55.00 | 11611.38 | 154547.51 |
| 17.25.1.61 | 8 Pole | 0.37 | 317.36 | 4224.03 |
| 17.25.1.62 | 8 Pole | 0.55 | 353.54 | 4705.66 |
| 17.25.1.63 | 8 Pole | 0.75 | 441.69 | 5878.94 |
| 17.25.1.64 | 8 Pole | 1.10 | 483.08 | 6429.73 |
| 17.25.1.65 | 8 Pole | 1.50 | 641.52 | 8538.61 |
| 17.25.1.66 | 8 Pole | 2.20 | 818.95 | 10900.24 |
| 17.25.1.67 | 8 Pole | 3.70 | 1397.83 | 18605.11 |
| 17.25.1.68 | 8 Pole | 5.50 | 1612.20 | 21458.44 |
| 17.25.1.69 | 8 Pole | 7.50 | 2004.48 | 26679.69 |
| 17.25.1.70 | 8 Pole | 9.30 | 2763.72 | 36785.17 |
| 17.25.1.71 | 8 Pole | 11.00 | 2871.15 | 38214.98 |
| 17.25.1.72 | 8 Pole | 11.00 | 3906.36 | 51993.70 |
| 17.25.1.73 | 8 Pole | 15.00 | 4719.93 | 62822.26 |
| 17.25.1.74 | 8 Pole | 18.50 | 5885.15 | 78331.34 |
| 17.25.1.75 | 8 Pole | 22.00 | 5885.15 | 78331.34 |
| 17.25.1.76 | 8 Pole | 30.00 | 9664.15 | 128629.89 |
| 17.25.1.77 | 8 Pole | 37.00 | 11692.16 | 155622.70 |
| 17.25.1.78 | 8 Pole | 45.00 | 13354.82 | 177752.65 |
| 17.25.1.79 | 8 Pole | 52.00 | 17627.77 | 234625.55 |
| 17.25.1.80 | 8 Pole | 55.00 | 17627.77 | 234625.55 |
| 17.25.1.81 | 8 Pole | 60.00 | 18332.87 | 244010.48 |
| 17.25.1.82 | 6 Pole | 75.00 | 14880.57 | 198060.45 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|-------------|-------|-------------|-----------|
| | | | Labour Rate | Supply |
| 17.25.1.83 | 8 Pole | 75.00 | 19320.24 | 255954.46 |
| 17.25.1.84 | 6 Pole | 82.00 | 18228.75 | 242624.68 |
| 17.25.1.85 | 8 Pole | 82.00 | 20832.80 | 277284.63 |
| 17.25.1.86 | 6 Pole | 90.00 | 16826.48 | 223960.47 |
| 17.25.1.87 | 8 Pole | 90.00 | 20832.80 | 277284.63 |

17.26 AIR CONDITIONING AND AIR COOLING

| Code No | Description | Unit | Rate in Rs. | |
|-----------|---|-------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.26.1 | SITC of factory assembled central evaporating package type plant having specifications as per ABC below The central package unit should be complete in all respect of following capacity. (A) Air washer section comprising of viscous pre air filter & Wet Pads made of 90% efficiency cellulose pads of 200mm thickness with necessary arrangement of water distribution system with required capacity of Electrical Driven Self priming monoblock pump. (B) Fan Section comprising of belt driven, forward curved double inlet centrifugal fan mounted on adjustable plate suitable for given discharge and two inch static-pressure. (C) The unit should be fabricated from 1.6mm G.I., sheet supported by angle iron frame and finished with stove enameled Paint, hinged supported inspection door, water storage tank made of 2.0mm GI pan with anticorrosive / rubber paint. Angle iron stand of size 40mmx40mmx6mm of height 100mm with anti vibration pad of suitable thickness. | | | |
| 17.26.1.1 | 30000 CFM | EACH | 15000.00 | 365750.00 |
| 17.26.1.2 | 25000 CFM | EACH | 12000.00 | 297200.00 |
| 17.26.1.3 | 20000 CFM | EACH | 10000.00 | 240000.00 |
| 17.26.1.4 | 15000CFM | EACH | 9000.00 | 176900.00 |
| 17.26.1.5 | 10000 CFM | EACH. | 8000.00 | 125300.00 |
| 17.26.1.6 | 8000 CFM | EACH | 7000.00 | 102450.00 |
| 17.26.1.7 | 7000 CFM | EACH | 6000.00 | 85350.00 |
| 17.26.1.8 | 6000 CFM | EACH | 5000.00 | 74000.00 |
| 17.26.1.9 | 5000 CFM | EACH | 5000.00 | 62500.00 |
| 17.26.2 | SITC of ducting made from GSS of class VIII & fabricated as per IS:677 and as per approved drawings & designs including the cost of hangers, supports , angle , expansion fasteners , T&P as required of following gauge: | | | |
| 17.26.2.1 | 24 G | Sqm | 65.00 | 381.00 |
| 17.26.2.2 | 22G | Sqm | 65.00 | 422.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.26.2.3 | 20 G | Sqm. | 75.00 | 460.00 |
| 17.26.2.4 | 18 G | Sqm. | 85.00 | 562.00 |
| 17.26.3 | S / F of accousting lining of duct work shall includes Anticorrosive treatment, fibre glass wrapping, tissue paper TF, chicken wiremesh of 28G and fixing with GI nut bolts | | | |
| 17.26.3.1 | 25mm thick fiber glass (150 Crown) | Sqm | 60.00 | 554.00 |
| 17.26.3.2 | 12mm thick fiber glass rigid board | Sqm. | 60.00 | 336.00 |
| 17.26.3.4 | S/F of Powder coated grills/ diffusers : | | | |
| 17.26.4.1 | SITC of MS Grill/Diffuser | | | |
| 17.26.4.1.1 | Double louvered supply air grills without dampers. Front louvers fixed & rear louvers movable. | Sqm. | 30.00 | 6896.00 |
| 17.26.4.1.2 | Rectangular supply air diffusers without dampers | Sqm. | 40.00 | 6894.00 |
| 17.26.4.2 | SITC of Aluminium Grills /Diffusers | | | |
| 17.26.4.2.1 | Double louvered supply air grills with dampers. Front louvers fixed & rear louvers movable. | Sqm. | 30.00 | 9196.00 |
| 17.26.4.2.2 | Round/ Rectangular supply air diffusers with dampers | Sqm. | 40.00 | 9194.00 |
| 17.26.4.2.3 | SITC of Aluminium grill/ diffuser damper | Sqm | 10.00 | 1148.00 |
| 17.26.5 | SITC of Air Cooled split Air conditioners complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (EP foam pipe section) upto 10 Mtr (IDU to ODU), copper power cable upto 10 Mtr (IDU to ODU), R-22 Refrigerant suitable for 400/230V +10% of 50 Hz 1 /3 AC supply capable of performing COOLING, DEHUMIDIFICATION, AIR CIRCULATION, FILTERATION & VENTILATION of following capacity with resprocating/ rotary/ scroll compressor as specified. | | | |
| 17.26.5.1 | Wall/Ceiling Mounted | | | |
| 17.26.5.1.1 | 1 ton | Each | 2000.00 | 34200.00 |
| 17.26.5.1.2 | 1.5 ton | Each | 2000.00 | 36500.00 |
| 17.26.5.1.3 | 2 ton | Each | 2000.00 | 45700.00 |
| 17.26.5.1.4 | 3 ton | Each | 3000.00 | 74300.00 |
| 17.26.5.1.5 | 4 ton | Each | 2000.00 | 80200.00 |

| Code No | Description | Unit | Rate in Rs. | |
|-------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.26.5.2 | Floor Standing(Tower Type) | | | |
| 17.26.5.2.1 | 2 ton | Each | 3000.00 | 57050.00 |
| 17.26.5.2.2 | 3 ton | Each | 3000.00 | 80050.00 |
| 17.26.5.2.3 | 4 ton | Each | 3000.00 | 114550.00 |
| 17.26.5.3 | Ductable Split type | | | |
| 17.26.5.3.1 | 1.5 Ton | Each | 1500.00 | 34275.00 |
| 17.26.5.3.2 | 2 Ton | Each | 2000.00 | 45700.00 |
| 17.26.5.3.3 | 2.5 Ton | Each | 2000.00 | 57200.00 |
| 17.26.5.3.4 | 3 ton | Each | 3000.00 | 68550.00 |
| 17.26.5.3.5 | 4 ton | Each | 4000.00 | 79900.00 |
| 17.26.5.3.6 | 5 ton | Each | 5000.00 | 102750.00 |
| 17.26.5.3.7 | 7.5 ton | Each | 5000.00 | 143000.00 |
| 17.26.5.3.8 | 10 ton | Each | 7000.00 | 171450.00 |
| 17.26.5.4 | Cassette type | | | |
| 17.26.5.4.1 | 1.5 Ton | Each | 7000.00 | 79450.00 |
| 17.26.5.4.2 | 2 Ton | Each | 8000.00 | 102300.00 |
| 17.26.5.4.3 | 3 ton | Each | 9000.00 | 136650.00 |
| 17.26.5.4.4 | 4 ton | Each | 10000.00 | 159500.00 |
| 17.26.6 | SF of rigid CPVC (25mm) drain piping of 6 kg/ cm ² with EP section insulation. | Mtr. | 10.00 | 286.00 |

17.27 SUB STATION EQUIPMENTS

| Code No | Description | Unit | Rate in Labour Rate |
|---------------------|--|------|------------------------|
| TRANSFORMERS | | | |
| 17.27.1 | <p>Supply, receiving, storing, inspection, handling, assembling, installing in correct aligned position, effecting proper connections, testing and commissioning of out door type oil filled off circuit tap changer transformer with the following specification and confirming to IS 2026(Part 1-5)</p> <p>No Load Voltage ratio : 11/0.433 KV</p> <p>No. of phases / frequency : 3 Phases/ 50 Hz</p> <p>Type : Core type, double copper wound</p> <p>Cooling : ONAN</p> <p>Vector Group : DYN11</p> <p>Temperature rise (OIL/WINDING) : 50 /55 deg C</p> <p>Off circuit Taps on HV side in the steps of +/- 2.5%, +/-5% & -7.5%</p> <p>Termination (HV) : Air filled cable end box suitable for 11 KV of adequate cable size</p> <p>Termination (LV) : Air filled cable end box suitable for 1.1 KV of adequate cable size</p> <p>The transformer shall be supplied with following fittings:</p> <p>Bochholz Relay</p> <p>Conservator with drain valve</p> <p>Magnetic Level Indicator</p> <p>Silica gel breather with oil seal</p> <p>First filling of filtered oil as per IS : 335 including make up fill during installation of transformer plus 10% extra oil</p> <p>off circuit switch</p> <p>Lifting lugs</p> <p>Earthing terminal- 2 nos.</p> <p>Thermometer pocket</p> <p>Air release plug</p> <p>Inspection cover</p> <p>Top filter valve - 1no.</p> <p>Radiator with top & bottom shut off valves</p> <p>100 mm dial magnetic oil level gauge with max. pointer & with alarm contacts</p> <p>Rating & Diagram plate</p> <p>Bi-directional Plain/ Flanged Rollers</p> <p>150 mm dial Winding temperature indicator with max pointer and alarm & trip contacts</p> <p>150 mm dial Oil temperature indicator with max pointer and alarm & trip contacts</p> | | |

| Code No | Description | Unit | Rate Labour Rate |
|------------|---|------|------------------------|
| | Disconnecting facility of HV Cable box Transformers described as above and as per the following continuous rating | | |
| 17.27.1.1 | 1000 KVA | Each | |
| 17.27.1.2 | 800 KVA | Each | |
| 17.27.1.3 | 750 KVA | Each | |
| 17.27.1.4 | 630 KVA | Each | |
| 17.27.1.5 | 500 KVA | Each | |
| 17.27.1.6 | 400 KVA | Each | |
| 17.27.1.7 | 315 KVA | Each | |
| 17.27.1.8 | 250 KVA | Each | |
| 17.27.1.9 | 200 KVA | Each | |
| 17.27.1.10 | 160 KVA | Each | |
| 17.27.1.11 | 125 KVA | Each | |
| 17.27.1.12 | 100 KVA | Each | |
| 17.27.1.13 | 63 KVA | Each | |
| 17.27.1.14 | 40 KVA | Each | |
| 17.27.1.15 | 25 KVA | Each | |
| 17.27.2 | SITC of battery bank of min 150 AH capacity comprising SMF/VRLA batteries , MS / Teakwood battery stand , interconnect wiring etc as required complete in all respect of rating: | | |
| 17.27.2.1 | 24 V DC | Each | 5000.00 |
| 17.27.2.2 | 48 V DC | Each | 6000.00 |
| 17.27.2.3 | 110 V DC | Each | 7500.00 |
| 17.27.3 | SITC of FCBC (Float cum boost charger)suitable for 415V +/-10%, 50 Hz , 1- ϕ / 3 - ϕ Input & 24/ 48 /110 V DC OutputNatural Cooled, free standing in Sheet Steel enclosure,SCR controlled , regulation +/-1% , Efficiency > 75% on FLAC/ DC Instruments, Selector Switch ,Built in DC Distribution Board (6 No MCB), indication , control as required of following rating: | | |
| 17.27.3.1 | 15A + 15A | Each | 3000.00 |
| 17.27.3.2 | 20 A + 20 A | Each | 4000.00 |
| 17.27.3.3 | 25 A + 25 A | Each | 5000.00 |
| 17.27.4 | Supply & Installation of D.P. Structure With AIR BREAK SWITCH having following specifications: | Each | 5000.00 |
| 17.27.4.1 | DP :double pole structure on 2no ISMB 125mm 10 mtr high pole or 2no PCC pole 10 mtr high using 7 no MS channel each of size 75mmx50mmx2500mm complete in all respect with nuts, springs washers, clamps as required. | | |

| Code No | Description | Unit | Rate in Labour Rate |
|-----------|---|------|---------------------------|
| 17.27.4.2 | GO:Off load type gang operated 3-pole vertical flute type switch suitable for 11KV ; 400A ,3-ø, central post rotating double break isolator complete with MS hardware , copper moving & fixed contact ,assembly of 9nos pin insulator ,GI pipe of suitable length for operation. | | |
| 17.27.4.3 | DO: 3nos Vertical / Horizontal mounted 11kv horn gap fuse set /drop out 11kv barrel fuses mounted on 6no pin insulators | | |
| 17.27.4.4 | LA:3 piece non linear resistor type. lighting arrestor of approved make suitable for 3 wire, 11kv oh linewith rated voltage of 9kv rms & nominal discharge current rating of 5 ka & complete with galvanized clamping arrangement GI bolts, nuts, washer etc as required. | | |
| 17.27.4.5 | JUMPERS: 3 no 11kv acsr conductors mounted on pin type insularors as required. 6.GENERAL:The go shall be operated by hand operated liver properly earthed with provision for locking mounted at 3' | | |
| 17.27.5 | <p>H.T. PANEL: AS INCOMER FEEDER</p> <p>Design, manufacture, supply, installation, testing and commissioning of 350 MVA, 11 KV indoor type, drawout, Vacuum circuit breaker Panel board fabricated (IP4-X) out of minimum 2 mm thick CRCA sheet as per following specifications.</p> <p>1 No. 11 KV 630 Amps, 250 MVA Electrical drawout type Vacuum Circuit Breaker [with ON/OFF/TRIP/service /test position indication]</p> <p>1 sets of. Communicable Digital Multifunction Meter consist of Ammeter,voltmeter,frequency meter,KW meter, KWH meter, KVAR meter & Power factor meter. This shall be with RS-485 port for comminaction to PLC/ SCADA.</p> <p>1 set of (3 nos.each) CTs for metering (630/1 A, Class1.0, 15 VA)</p> <p>1 set of (3 nos each). PTs for metering(11000/1.732/110/1.732 V,110 VA, CI 1.0)</p> <p>1 set of Undervoltage relay</p> <p>1 Set of phase indication lamps with HRC fuses (Red, Yellow and Blue).</p> <p>3 nos of IDMT O/C and 1 no of E/F relay complete with 4 nos. (1 set). Current transformer 630/1A, CL-5P 10 for protection, 15 VA burden.</p> <p>1 sets of master trip relay(86)</p> | Set | 1.00 |
| | Bus Bar : | | |

| Code No | Description | Unit | Rate in Labour Rate |
|------------|---|------|---------------------------|
| 630A | colour coded heat shrinkable sleeved TP Aluminum (Electrolyte grade) busbar of 250 MVA fault rating. | | |

| Code No | Description | Unit | Rate in Labour Rate |
|---------|---|------|------------------------|
| 17.27.6 | <p>H.T. PANEL:AS OUTGOING FEEDER</p> <p>Design, manufacture, supply, installation, testing and commissioning of 250 MVA, 11 KV indoor type, drawout, Vacuum circuit breaker Panel board fabricated out of minimum 2 mm thick CRCA sheet as per following specifications. The panel shall be complete</p> <p>1 No. 11 KV, 630 A, 250 MVA Electrical drawout type vacuum circuit breaker (with ON/OFF/TRIP/Service/Test position indication).</p> <p>2 sets of ammeter with 3 way ON and OFF selector switch and CT's 30/5 A, CL-1, 15VA.</p> <p>Two sets of IDMT & Instantaneous O/C and IDMT E/F relay complete with 4 Nos. (1 set) current transformers 630/1A, CL-5 P 10 for protection, 15 VA burden.</p> <p>Bus Bar : 630A colour coded heat shrinkable sleeved TP Aluminum (Electrolyte grade) busbar of 250 MVA fault rating.</p> | Set | 1.00 |
| 17.27.7 | <p>H.T. PANEL: AS BUS COUPLER FEEDER</p> <p>Design, manufacture, supply, installation, testing and commissioning of 250 MVA, 11 KV indoor type, drawout, Vacuum circuit breaker Panel board fabricated out of minimum 2 mm thick CRCA sheet as per following specifications. The panel shall be complete</p> <p>1 No. 11 KV 630 Amps, 250 MVA Electrical drawout type Vacuum Circuit Breaker [with ON/OFF/TRIP/service /test position indication]</p> <p>1 Set of phase indication lamps with HRC fuses (Red, Yellow and Blue).</p> <p>Bus Bar : 630A colour coded heat shrinkable sleeved TP Aluminum (Electrolyte grade) busbar of 250 MVA fault rating.</p> | Set | 1.00 |
| 17.27.8 | <p>Supply, Installation, Testing & Commissioning of HT metering cubical panel as approved By DISCOMs fabricated out of 14 SWG CRCA sheet steel in two compartment & MS angle of size 60mmX6mm having provision for Following: (i)Provision for fixing Trivector Meter (To be supplied by DISCOMs) (ii)Provision for fixing of combined CT PT Set (To be supplied by DISCOMs), (iii)TT Block, (iv) 6mm Bakelite sheet on all sides.</p> | Each | 1500.00 |

| Code No | Description | Unit | Rate in Labour Rate |
|----------|---|------|------------------------|
| 17.27.9 | S I T C of 11KV E-SFU (Fused-RMU) oil immersed 400A, 350 MVA Metal Clad complete in all respect With oil , fuses etc as required PMCC Drawout type | Each | 8000.00 |
| 17.27.10 | Supply,installation,testing and commissioning of floor mounted drawout type PMCC(indoor dury,dust proof,vermin proof IP-4Xfront operated with 2 mm thick sheet metal compartmentalised) with all accessible parts,heat shrinkable sleeves,SMC/DMC bus bar supports,padlocking facility on outgoing feeders etc. | | |
| 17.27.11 | Incommer feeder for transformer 630A/800A,50KA,ACB 3 pole,AI Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's,IDMT 3O/C&1 E/F,indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X | Each | 16871.40 |
| 17.27.12 | Incommer feeder for transformer 1000A,50KA,ACB 3 pole,AI Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's,IDMT 3O/C&1 E/F,indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X | Each | 17276.40 |
| 17.27.13 | Incommer feeder for transformer 1250 A,50KA,ACB 3 pole,AI Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's,IDMT 3O/C&1 E/F,indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X | Each | 17546.26 |
| 17.27.14 | Incommer feeder for transformer 1600 A,50KA,ACB 3 pole,AI Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's,IDMT 3O/C&1 E/F,indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X | Each | 19031.00 |
| 17.27.15 | Bus Coupler Feeder, 630/800 A ACB ,50KA,3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D) | Each | 16871.40 |
| 17.27.16 | Bus Coupler Feeder, 1000 A ACB ,50KA,3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D) | Each | 17276.40 |

| Code No | Description | Unit | Rate in Labour Rate |
|------------|---|------|------------------------|
| 17.27.17 | Bus Coupler Feeder, 1250 A ACB,50 KA, 3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D) | Each | 17546.26 |
| 17.27.18 | Bus Coupler Feeder, 1600 A ACB,50KA, 3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D) | Each | 18761.04 |
| 17.27.19 | 250 A MCCB Incomer with Meetering CT's,Ampermeter with SS,Voltmeter with SS,Indicating Lamps,Control Fuse,wiring etc.complete in all respect.Size:900(W)X2400(H)X1000(D) | Each | 7423.42 |
| 17.27.20 | 400 A MCCB Incomer with Meetering CT's,Ampermeter with SS,Voltmeter with SS,Indicating Lamps,Control Fuse,wiring etc.complete in all respect.Size:900(W)X2400(H)X1000(D) | Each | 7828.31 |
| 17.27.21 | Upto 3.7 KW DOL Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB Size : 600 (W) x 400 (H) x 600 (D) | Each | 3374.28 |
| 17.27.22 | From 5.5 KW to 7.5 KW DOL Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB (Size : 600 (W) x 400 (H) x 600 (D) | Each | 3509.21 |
| 17.27.23 | From 9.3 KW to 22 KW DOL Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB (Size : 600 (W) x 600 (H) x 600 (D) | Each | 3644.14 |
| 17.27.24 | From 30 KW to 55KW Star-Delta Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB (Size : 600 (W) x 600 (H) x 600 (D) | Each | 4184.17 |
| 17.27.25 | 55 KW to 90 KW Soft Starter Feeder without Soft Starter with 3 phase Size: 600 (W) x 900 (H) x 600 (D) | Each | 4723.99 |
| 17.27.26 | VFD/Soft Starter Feeder without VFD and soft starters for the following ratings | | |
| 17.27.26.1 | 250 A MCCB as outgoing CT's,Ampermeter with SS,Voltmeter with SS,Indicating Lamps,Control Fuse,wiring etc.complete in all respect.Size:900(W)X2400(H)X1000(D) | Each | 8098.27 |

| Code No | Description | Unit | Rate Labour Rate |
|---------------|--|------|---------------------|
| 17.27.26.2 | 160 A MCCB as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)X2400(H)X1000(D) | Each | 7153.56 |
| 17.27.26.3 | 125 A MCCB as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)X2400(H)X1000(D) | Each | 6613.63 |
| 17.27.26.4 | MCCB up to 100A as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)X2400(H)X1000(D) | Each | 6073.70 |
| 17.27.26.5 | 630 A to 1250 A Empty Panel (Without switchgears) Size 900 (W) x 2400 (H) x 1000 (D) | Each | 4319.10 |
| 17.27.26.6 | Charge for IP Test | | 39600.00 |
| 17.27.26.7 | Charge for SC Test for 50 KA /1 second | | 47520.00 |
| 17.27.26.8 | Charge for Temperature Rise Test | | 39600.00 |
| 17.27.26.9 | Fraight Charges to CPRI | | 39600.00 |
| DG Set | | | |
| 17.27.27 | SITC of DG Set complete with 1500 RPM Diesel Engine of suitable BHP & AC Brush less SPDP Alternator mounted on a common base Frame & coupled through a flexible coupling or close coupled. Alternator shall be self regulated with standard Alternator Protection(Over voltage , over speed & under voltage). Engine shall have residential silencer, up to 10 M exhaust piping , electronic / Mechanical governor, Manual & electric Start , Batteries, Fuel tank (with Stand) & piping , control panel (16 G) with MCCB (4P; 25 KA), Ammeter, Voltmeter, Frequency Meter, Energy Meter & Hour Meter, Engine instruments panel, AVM and with Weatherproof, powder coated Accoustic enclosure for DG set for sound attenuation fabricated from 2.0 mm CRCA sheet steel (structure) with side wall fabricated from 2.0 mm CRCA sheet & filled with 100mm thick glass wool(96Kg/m3) as per IS 8183 the doors of 100 mm thick and fabricated from 1.6mm CRCA sheet packed with accoustic material, floor of MS chequered plate 5.0mmthick, canopy fixed with axial flow fan of Alstom, CG, Almonard make. All doors/ opening are sealed with neoprene/EPDN gaskets. The enclosure has built in fuel tank, residential silencer (isolated from main DG chamber) with protection and tripping of DG set against temperature of more than 50 degree centigrade. All controls for operation of DG set are from outside the enclosure with DG control panel mounted inside enclosure , visible and accessible from outside. The enclosure should be suitable for following capacity DG sets and alternator. Noise level is less than 74 db(A) at a distance of 1 Mtrs. Complete in all respect of following capacity : | | |
| 17.27.27.1 | A-Air Cooled & Naturally Aspirated- | | |

| Code No | Description | Unit | Rate in Labour Rate |
|-------------|---|------|------------------------|
| 17.27.27.2 | 25 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.3 | 30 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.4 | 40 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.5 | 50 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.6 | 62.5 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.7 | 75/80 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.8 | 25 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.9 | 30 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.10 | 40 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.11 | 50 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.12 | 62.5 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.13 | 75/80 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 7500.00 |
| 17.27.27.14 | 125 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 10000.00 |
| 17.27.27.15 | 180 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 10000.00 |
| 17.27.27.16 | 250 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 10000.00 |
| 17.27.27.17 | 320 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 12000.00 |
| 17.27.27.18 | 500 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | 15000.00 |
| 17.27.28 | SITC of AUTO MAINS FAILURE (AMF) Panel fabricated from CRCA sheet steel 2mmThick , Powder coated finish , Engine START & STOP commands,control RELAYS, selector switches for Ammeter & Voltmeter, Ammeter & Voltmeter , Control & Power Contactors, Timers, Electronic Hooter ,Visual & Alarm indication for faults, UPS, operator interface panel complete in all respect suitable for following capacity DG sets: | | |
| 17.27.28.1 | PLC Based: | | |
| 17.27.28.2 | 25 to 40 KVA | Each | 2000.00 |
| 17.27.28.3 | 50 to 63.5 KVA | Each | 3000.00 |
| 17.27.28.4 | 80 to 160 KVA | Each | 5000.00 |
| 17.27.28.5 | 180 to 250 KVA | Each | 5000.00 |
| 17.27.28.6 | 320 to 500 KVA | Each | 8000.00 |
| 17.27.28.7 | Radiator Cooled & Turbo Charged /AC | | |
| 17.27.28.8 | Electro-Mechanical Relay Based | | |
| 17.27.28.9 | 25 to 63.5 KVA | Each | 2000.00 |
| 17.27.28.10 | 80 to 180 KVA | Each | 3000.00 |
| 17.27.28.11 | 200 to 500 KVA | Each | 5000.00 |
| 17.27.28.12 | S/F of DG Set Exhaust Piping insulation | | |
| 17.27.28.13 | Asbestos rope insulation | Mtr. | 25.00 |
| 17.27.28.14 | Rock /Glass wool with Al cladding (Density- 96 kg/m3, Thickness-50 mm) | Mtr. | 50.00 |

1 Rs.

Price

1 Rs.

Price

#####

988056.00
916198.00
844339.00
691639.00
565887.00
485046.00
431152.00
332346.00
287434.00
242523.00
215576.00
161682.00
129345.00
107788.00

50000.00
100000.00
150000.00

50000.00
60000.00
70000.00
35000.00

1 Rs.

Price

529000.00

1 Rs.

Price

1 Rs.

Price

511000.00

485000.00

15000.00

1 Rs.

Price

110000.00

224558.33

229948.83

233540.67

253302.62

224558.33

229948.83

1 Rs.

Price

233540.67

249709.42

98805.67

104194.79

44911.67

46707.59

48503.50

55691.29

62876.33

107788.00

1 Rs.

Price

95213.83

88027.42

80841.00

57487.21

1 Rs.

Price

350000
375000
400000
460000
495000
500000
350000
355000
390000
410000
470000
520000
680000
985000
1350000
1750000
2941000

75000
100000
150000
200000
250000

50000
90000
125000

200
1000

17.28 FIRE PROTECTION WORKS

| Code No. | Description | Unit | Rate in Rs. | |
|-----------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.1 | SITC of electric driven Sprinkler / Hydrant pump Suitable for auto-matic Operation consisting of the following A, B, C | | | |
| (A) | Horizontal multi stage Centrifugal suction type pump complete for delivery of below mentioned discharge complete with necessary sluice value on the suction side (all items to be matching the suction side of the pump) and pressure gauge sluice value and non return valve on the delivery side side (all of the necessary dia) and including bypass arrangement for testing of pump | | | |
| (B) | Squirrel cage induction motor suitable for 415 V, 50 HZ, Ac supply of below mentioned HP for the above pump ,1450 RPM T.E.F.C confirming to IP:55 and flexible coupling and coupling guard with the pump. | | | |
| (C) | Common bed plate fabricated from mild steel channel or cast iron type | | | |
| 17.28.1.1 | 1620 LPM at 56 Mtr Head (40 HP motor) | Each | 2500.00 | 114625.00 |
| 17.28.1.2 | 1620 LPM at 70 Mtr Head (50 HP Motor) | Each | 3000.00 | 143300.00 |
| 17.28.1.3 | 2280 LPM at 70 Mtr Head (60 HP Motor) | Each | 4000.00 | 148900.00 |
| 17.28.1.4 | 2850 LPM at 70 Mtr Head (75 HP Motor) | Each | 5000.00 | 229250.00 |
| 17.28.1.5 | 4500 LPM at 70 Mtr Head (120 HP Motor) | Each | 7500.00 | 286375.00 |
| 17.28.2 | SITC of diesel engine drive Standby Pump suitable for automatic operation consisting of the following A, B, C. .The Diesel driven pump shall be suitable for following discharge: | | | |
| (A) | Horizontal multi stage centrifugal suction type pump complete for delivery of below mentioned discharge complete with necessary flexible pipe, sluice value on the suction side (all items shall be matching the suction side of the pump) and pressure gauge, sluice valve and non return valve on the delivery side (all of the necessary dia) and including bypass arrangement for testing of pump | | | |

| Code No. | Description | Unit | Rate in Rs. | |
|-----------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| (B) | Water cooled Diesel Engine developing suitable BHP for the below mentioned discharge at 1800 RPM, flexible coupling and coupling guard with the Pump, common bed plate for mounting of the Engine and Pump, d cushy foot, damping arrangement by cushy foot, Diesel Engine starting Panel for starting of the engine automatically with a unit of battery of 12/24v, 88 Ah, 13/21 plate , Exhaust Pipe of minimum 10 M length, with muffler, day oil tank of 300 lts capacity with first charge and hand operated oil pumping set, Supply, installation, testing, & commissioning of electric driven automatic pressurization pump set | | | |
| (C) | Horizontally mounted single stage centrifugal end delivery pump of below mentioned discharge with necessary sluice valve on the suction side (all items matching the suction side of the pump) and sluice valve, non return valve, pressure gauge on the delivery side including by pass arrangement for testing of the working of the pumping set as required | | | |
| 17.28.2.1 | 1620 LPM at 56 Mtr Head (40 HP Engine) | Each | 10000.00 | 343500.00 |
| 17.28.2.2 | 1620 LPM at 70 Mtr Head (50 HP Engine) | Each | 12000.00 | 366200.00 |
| 17.28.2.3 | 2280 LPM at 70 Mtr Head (60 HP Engine) | Each | 14000.00 | 400400.00 |
| 17.28.2.4 | 2850 LPM at 70 Mtr Head (75 HP Engine) | Each | 15000.00 | 486500.00 |
| 17.28.2.5 | 4500 LPM at 70 Mtr Head (120 HP Engine) | Each | 17000.00 | 572450.00 |
| 17.28.3 | SITC of Jockey pump having Squirrel cage induction motor suitable for 415 V, 50 Hz AC supply with synchronous speed of 2900 RPM T.E.F.C type confirming to IP:55 and flexible coupling and coupling guard with the pump ,Common bed plate of fabricated mild steel channel or cast iron type. | | | |
| 17.28.3.1 | 1800 LPM at 70 Mtr (15 HP) | Each | 2000.00 | 57200.00 |
| 17.28.3.2 | 1800 LPM at 56 Mtr (7.5 HP) | Each | 1500.00 | 45775.00 |
| 17.28.4 | SITC of pressure switches for Main, Jockey, and standby pumps, including necessary wiring UPTO control panel and stop valve. | Each | 125.00 | 2051.00 |
| 17.28.5 | Providing, fixing, jointing and testing of Heavy Gauge (C class) MS Pipe ISI marked with accessories like tees, elbows, flanged joints, reducers, compressed asbestos gaskets, nuts and bolts including fixing the pipe with suitable flat iron strip clamps /bracket, painting etc. Complete as required for delivery/ suction manifold relating to the pump including painting of two coats of Red Oxide and two coat of post office red enamel paint including all civil breakages and making good the same : | | | |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.5.1 | 80mm dia | Mtr. | 30.00 | 456.00 |
| 17.28.5.2 | 100mm dia | Mtr. | 40.00 | 626.00 |
| 17.28.5.3 | 150mm dia | Mtr. | 50.00 | 912.00 |
| 17.28.5.4 | 200mm dia | Mtr. | 75.00 | 1312.00 |
| 17.28.5.5 | 250mm dia | Mtr. | 100.00 | 1710.00 |
| 17.28.5.6 | 300mm dia. | Mtr. | 150.00 | 2162.00 |
| 17.28.6 | Supplying & Installing cylindrical type air vessel, 250 mm dia 1.5M high of thickness 6.0 mm M.S. complete with air release valve, safety valve, pressure gauge etc.along with two coats of Red Oxide and two coat of post office red enamel paint as required. | Each | 200.00 | 3420.00 |
| 17.28.7 | Providing & fixing 100mm dia pressure Gauge on Pump Delivery Line complete with shut off cock. | Each | 25.00 | 284.00 |
| 17.28.8 | Providing and laying M. S. (Medium duty B class) pipe IS ; 1239 marked including all accessories such as screwed/ welded flanges, tees, reducers etc. Conforming to IS : 1239 complete including painting, welding, jointing and compressed asbestos gaskets, nuts, bolts etc. as required. The pipe shall be painted with one coat of Primer & two coats of post office red primer paint fixed in ceiling, walls, columns for all heights with hangers/supports and fasteners including chasing of walls/ colums/ ceilings etc. and making good the same complete as required. | | | |
| 17.28.8.1 | 150 mm dia pipe | Mtr. | 75.00 | 794.00 |
| 17.28.8.2 | 100mm dia pipe. | Mtr. | 50.00 | 568.00 |
| 17.28.8.3 | 80mm dia pipe. | Mtr. | 40.00 | 396.00 |
| 17.28.8.4 | 65mm dia pipe. | Mtr. | 30.00 | 340.00 |
| 17.28.8.5 | 50mm dia pipe. | Mtr. | 20.00 | 284.00 |
| 17.28.8.6 | 40mm dia pipe. | Mtr. | 15.00 | 199.00 |
| 17.28.8.7 | 32mm dia pipe. | Mtr. | 12.00 | 171.00 |
| 17.28.8.8 | 25mm dia pipe. | Mtr. | 10.00 | 114.00 |
| 17.28.8.9 | 200 mm dia MS (Medium duty B class) pipe with cleaning,wrapping and coating of the pipe as per IS; 10221 in all kind of soil at 1.0 M depth including excavation as required. | Mtr. | 100.00 | 848.00 |
| 17.28.8.10 | Same as 04 above but for 150 mm dia. | Mtr. | 100.00 | 1192.00 |
| 17.28.8.11 | Same as 04 above but for 100 mm dia. | Mtr. | 75.00 | 794.00 |
| 17.28.8.12 | Same as 04 above but for 80 mm dia. | Mtr. | 75.00 | 564.00 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.9 | Providing and fixing single headed hydrant valves with flanged inlet ISI marked with 63 mm female instantaneous outlet of gun metal complete with blank cap and chain conforming to IS : 5290 | Each | 75.00 | 4014.00 |
| 17.28.10 | Providing . 63 mm dia 15 M long reinforced rubber hose pipe conforming to IS : 636-1962, Part –A & ISI marked with Gun Metal male & female coupling wire wound with the pipe. | Each | 10.00 | 3678.00 |
| 17.28.11 | Providing and fixing Swinging Drum type hose reel ISI marked 30M (L) x 20 mm (dia) rubber lined pipe with shut off nozzle of 6 mm dia including the cost of 25 mm dia pipe connection from riser to hose reel , all sockets, nipples, elbows and 25 mm globe valve. | Each | 100.00 | 6310.00 |
| 17.28.12 | Providing & fixing (1.0 M x .45 M x 0.6 M) OUTDOOR HOSE CABINET suitable for accommodating hydrants made of not less than 16 swg. M. S. sheet having central opening glazed door including necessary locking arrangement, painting (one coat primer & two coats of paint) and housing 2 Nos. RRL hose pipe, 1 No branch pipe. | Each | 100.00 | 2860.00 |
| 17.28.13 | Providing & fixing (0.9 M WIDE x 1.8 M HEIGHT) INDOOR HOSE CABINET suitable for accomodating hydrants made of TUBULAR pipe having central opening glazed door including necessary locking arrangement, painting (one coat primer & two coats of paint) and housing 2 Nos. RRL hose pipe, 1 no branch pipe. | Each | 100.00 | 3435.00 |
| 17.28.14 | Providing & fixing cast iron double flanged type sluice valve of the following size complete with bolts, nuts, washers and compressed asbestos gaskets as required; | | | |
| 17.28.14.1 | 250 mm dia | Each | 200.00 | 11470.00 |
| 17.28.14.2 | 200 mm dia | Each | 175.00 | 9979.00 |
| 17.28.14.3 | 150 mm dia | Each | 150.00 | 8258.00 |
| 17.28.14.4 | 100 mm dia | Each | 125.00 | 5501.00 |
| 17.28.14.5 | 80 mm dia | Each | 100.00 | 3895.00 |
| 17.28.14.6 | 65 mm dia | Each | 75.00 | 3439.00 |
| 17.28.15 | Providing & making drainage Provision for the risers with necessary 40 mm dia pipe stop valve etc as required with Maximum length of pipe 6 M. | Each | 125.00 | 1361.00 |
| 17.28.16 | Providing and fixing non return valve complete with bolts nuts washers and compressed asbestos gasket etc as required : | | | |
| 17.28.16.1 | 200 mm dia | Each | 150.00 | 5325.00 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.16.2 | 150 mm dia | Each | 100.00 | 3435.00 |
| 17.28.16.3 | 100 mm dia | Each | 75.00 | 2519.00 |
| 17.28.17 | Providing and fixing ISI marked Three Way fire Brigade Inlet to wet Riser with non return valve complete in all respects | Each | 100.00 | 6885.00 |
| 17.28.18 | Providing and fixing suction coupling for fire brigade withdrawal of water from tank with 150mm dia pipe and foot valve.(Pipe max 10 M long) | Each | 150.00 | 4348.00 |
| 17.28.19 | Providing and making 1.0 Mx 1.0 M (internal size) sluice valve chamber of 230 mm thick brick walls on 100 mm external plaster. The Man Hole shall have a 116 kg CI/ ferro cement cover. | Each | 100.00 | 2860.00 |
| 17.28.20 | Providing and fixing air release valve with air vessels at the top of Risers. 250 mm dia, 1 Mtr long | Each | 100.00 | 3435.00 |
| 17.28.21 | SITC of Installation Control Valve (ICV) inclusive of 150 mm dia sluice valve ,Alarm valve , water Gong ,Pressure gauge and other miscellaneous valves and fittings as required . | Each | 300.00 | 35605.00 |
| 17.28.22 | Providing, fixing, testing & commissioning of sprinkler heads of the following type : | | | |
| 17.28.22.1 | Pendant type with quartziod bulb, operating temperature at 68 deg C as per specifications. | Each | 20.00 | 227.00 |
| 17.28.22.2 | Upright type with quartzoid bulb , fixed on a short stem - operating temperature at 68 deg C as per specifications | Each | 20.00 | 227.00 |
| 17.28.22.3 | Sidewall Sprinklers (ordinary) | Each | 20.00 | 284.00 |
| 17.28.22.4 | Extended Throw Sidewall type . | Each | 20.00 | 457.00 |
| 17.28.22.5 | Pendent type but rated at 141 degrees Centigrade. | Each | 20.00 | 457.00 |
| 17.28.22.6 | Auto Flow Control Sprinkler Head. | Each | 20.00 | 1722.00 |
| 17.28.22.7 | Concealed type but rated at 68 deg C. | Each | 20.00 | 342.00 |
| 17.28.23 | Providing & fixing 10 SWG chrome plated brass 100 mm dia decorative flanges / escutcheon plates to be fixed at junction of Sprinkler piping with the false ceiling. | Each | 5.00 | 57.00 |
| 17.28.24 | Providing & fixing Butterfly valve with Cast Iron Body, Cast Iron Disc and Seat of Nitrile Rubber Bonded on Bakelite with hard back to PN 1.6 rating with following sizes complete with bolts, washers and compressed asbestos gasket as required | | | |
| 17.28.24.1 | 150 mm dia | Each | 150.00 | 5152.00 |
| 17.28.24.2 | 100 mm dia | Each | 125.00 | 2856.00 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.24.3 | 80 mm dia | Each | 100.00 | 1825.00 |
| 17.28.24.4 | 50 mm dia | Each | 100.00 | 1365.00 |
| 17.28.25 | Providing and fixing 10 mm dia M S pipe drainage arrangement for Sprinkler Headers including stop valve with a maximum Pipe length of 5 Mtr. | Each | 100.00 | 1135.00 |
| 17.28.26 | SITC Smoke Detector (Dual Chamber) Ionization type with mounting base , LED , etc complete as required. | | | |
| 17.28.26.1 | Conventional type | Each | 50.00 | 1832.00 |
| 17.28.26.2 | Analogue addressable type | Each | 50.00 | 2868.00 |
| 17.28.27 | SITC Photo Electric type Smoke Detector with mounting base. LED, with etc complete as required . | | | |
| 17.28.27.1 | Conventional type | Each | 50.00 | 2488.00 |
| 17.28.27.2 | Analogue addressable type | Each | 50.00 | 3442.00 |
| 17.28.28 | SITC of Rate of Rise cum fixed Temperature thermistor type Heat Detector with mounting base LED, complete as required . | | | |
| 17.28.28.1 | Conventional Type | Each | 50.00 | 1401.00 |
| 17.28.28.2 | Analogue Addressable type | Each | 50.00 | 2292.00 |
| 17.28.29 | SITC Manual Call Point complete with , Glass, hammer and chain etc as required: | | | |
| 17.28.29.1 | Conventional type | Each | 50.00 | 452.00 |
| 17.28.29.2 | Analogue addressable type | Each | 50.00 | 1142.00 |
| 17.28.30 | SITC Speaker cum electronic Hooter mounted in M S sheet box with perforated front mesh for PA and Emergency System. | Each | 10.00 | 171.00 |
| 17.28.31 | SITC Duct Casting Unit with casing of fabricated aluminous and hinged inspection cover, 1 no outlet tube 7.5 cm long & with 1 no Conventional /analogue addressable Photo Electric type Smoke Detector with mounting base , address switch complete as required | Each | 150.00 | 3428.00 |
| 17.28.32 | SITC Fault Isolators for isolating shorted, dead wire and loose circuits between two successive Fault Isolators with automatic resetting arrangement. | | | |
| 17.28.32.1 | Analogue addressable type | Each | 20.00 | 4022.00 |
| 17.28.33 | SITC Automatic commendable Control Switches for shutting down AC Plant, Power Supply, Gas Supply etc. | | | |
| 17.28.33.1 | Analogue addressable type | Each | 50.00 | 4018.00 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.33.2 | Response Indicators | Each | 20.00 | 112.00 |
| 17.28.34 | SITC of microprocessor based 2 - wire loop (each loop accessing 90 addressable units) Fire Alarm Control Panel. The Panel shall be able to give pin point location of addressable units via the address code for each unit. The Panel shall also be able to automatically switch off all control switches when-ever any Alarm is triggered. The Panel shall also be able to give voice announcement to individualized speakers. The Panel shall have built in sounder, Maintenance Free Batteries of minimum 15 Ah of 24 volts capable of minimum of 12 hours with battery charger, rectifier. Loop cards, LCD unit to indicate Fire / Fault Signal of individual unit, built in-built / external printer, to log all incoming data etc complete in all respect. | | | |
| 17.28.34.1 | 1-LOOP | Each | 5000.00 | 171750.00 |
| 17.28.34.2 | 2-LOOP | Each | 10000.00 | 199750.00 |
| 17.28.35 | SITC of wall / floor type following zone (each zone accessing 20 units) Conventional Type solid state main control panel fabricated from 16 SWG CRCA sheet steel incorporating audio –visual indication for each zone with Public address system complete with 2x250W channel mixing amplifier , Required zone floor selector console, 1-No cardioid goose neck microphone , 1-No professional grade cassette deck 6-way PA selector with “ ALL CALL “, & sealed maintenance free (SMF) batteries of min 42 AH of 2X12 V. | | | |
| 17.28.35.1 | 5-zone | Each | 1000.00 | 28600.00 |
| 17.28.35.2 | 10-zone | Each | 2000.00 | 85950.00 |
| 17.28.35.3 | 15-zone | Each | 2500.00 | 114625.00 |
| 17.28.35.4 | 20-zone | Each | 3000.00 | 146175.00 |
| 17.28.36 | Providing and fixing flexible 20 mm dia PVC conduit 2 MM thick including all necessary supports, clamps, jointing pieces etc for drop of wire/cable from slab / wall. | Each | 5.00 | 22.00 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|--|-------------|----------------|-----------------|
| | | | Labour Rate | Complete Rate |
| 17.28.37 | Providing, installing & commissioning of PA system Operator Console complete with following capacity , channel mixing amplifier , 1 no cardioids goose neck microphone , 1 no professional grade cassette deck, 15 zone floor selector console , a change over Panel for connection to the fire Alarm Panel, a Mains Panel, a Monitor Panel all pre wired and rack mounted complete in all respects. PA system shall be coupled to the Fire Alarm System | | | |
| 17.28.37.1 | 1 x 100 Watt | Each | 500.00 | 11425.00 |
| 17.28.37.2 | 6 x 120 Watt | Each | 2000.00 | 57200.00 |
| 17.28.38 | SITC of conventional type solid State Local Control panel (LCP) of following zones for wall mounting type fabricated out of 16 SWG CRCA sheet steel incorporating audio visual indication for each zone but without battery & battery charger etc complete in all respect. | | | |
| 17.28.38.1 | 5-zone | Each | 2000.00 | 16950.00 |
| 17.28.38.2 | 10-zone | Each | 3000.00 | 22550.00 |
| 17.28.38.3 | 15-zone | Each | 4000.00 | 29875.00 |
| 17.28.38.4 | 20-Zone | Each | 5000.00 | 56750.00 |
| 17.28.39 | Providing and fixing with bracket/ supports etc wall/floor mounted fire extinguishers as per details below: | | | |
| 17.28.39.1 | ISI marked water gas pressure type extinguisher 9 lts capacity with discharge tube, gun metal cap, 60 gms carbon Dioxide cartridge complete in all respects. | Each | 50.00 | 1832.00 |
| 17.28.39.2 | ISI marked 10 kg capacity Dry Powder fire extinguisher with high pressure discharge hose, squeeze gripe nozzle 120 gms carbon dioxide cartridge, gun metal cap with initial charge of dry power. Both extinguisher and dry power to be ISI marked. | Each | 50.00 | 2580.00 |
| 17.28.39.3 | ISI marked 5 kg capacity Dry Powder fire extinguisher with high pressure discharge hose, squeeze gripe nozzle 120 gms carbon dioxide cartridge, gun metal cap with initial charge of dry power. Both extinguisher and dry power to be ISI marked. | Each | 50.00 | 1372.00 |
| 17.28.39.4 | Carbon Dioxide type fire extinguisher with cylinder fully charge of 4.5 kg capacity. | Each | 50.00 | 5052.00 |
| 17.28.40 | Providing and fixing charged ABC type fire extinguisher including the cost of fixing with nut, bolts etc as required. | | | |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.40.1 | 2 Kg | Each | 50.00 | 1718.00 |
| 17.28.40.2 | 5 Kg | Each | 50.00 | 2292.00 |
| 17.28.41 | Supplying and fixing of Electric Flow switch for sprinkler system annunciation | Each | 50.00 | 2868.00 |
| 17.28.42 | SITC of sprinkler system annunciation panel | | | |
| 17.28.42.1 | 5 zone | Each | 2000.00 | 16950.00 |
| 17.28.42.2 | 10 zone | Each | 3000.00 | 22550.00 |
| 17.28.42.3 | 15 zone | Each | 5000.00 | 33750.00 |

Electrical & Instrumentation

| | | | | |
|--------------|---|------|--|-----------|
| 17.28.43 | SITC of Silent DG Set complete with 1500 RPM Diesel Engine of suitable BHP & AC Brush less SPDP Alternator mounted on a common base Frame & coupled through a flexible coupling or close coupled. Alternator shall be self regulated with standard Alternator Protection(Over voltage , over speed & under voltage). Engine shall have residential silencer, up to 10 M exhaust piping , electronic / Mechanical governor, Manual & electric Start ,Batteries, Fuel tank (with Stand) & piping , control panel (16 G) with MCCB (4P; 25 KA), Ammeter, Voltmeter, Frequency Meter, Energy Meter & Hour Meter, Engine instruments panel, AVM and with Weatherproof, powder coated Accoustic enclosure for DG set for sound attenuation fabricated from 2.0 mm CRCA sheet steel (structure) with side wall fabricated from 2.0 mm CRCA sheet & filled with 100mm thick glass wool (96Kg/m3) as per IS 8183 the doors of 100 mm thick and fabricated from 1.6mm CRCA sheet packed with accoustic material, floor of MS chequered plate 5.0mm thick, canopy fixed with axial flow fan of Alstom, CG, Almonard make. All doors/opening are sealed with neoprene/EPDN gaskets. The enclosure has built in fuel tank, residential silencer (isolated from main DG chamber) with protection and tripping of DG set against temperature of more than 50 degree centigrade. All controls for operation of DG set are from outside the enclosure with DG control panel mounted inside enclosure , visible and accessible from outside. The enclosure should be suitable for following capacity DG sets and alternator. Noise level shall be less than 75 db(A) at a distance of 1 Mtrs. duly certified by authorised agency etc. complete in all respect of following capacity : | | | |
| 17.28.43.1 | A-Air Cooled & Naturally Aspirated- | | | |
| 17.28.43.1.1 | 25 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | | 350000.00 |
| 17.28.43.1.2 | 30 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | | 375000.00 |
| 17.28.43.1.3 | 40 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | | 400000.00 |
| 17.28.43.1.4 | 50 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | | 460000.00 |
| 17.28.43.1.5 | 62.5 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | | 495000.00 |
| 17.28.43.1.6 | 75/80 KVA at 0.8 pf 415V 50Hz 3-Ø | Each | | 500000.00 |

| Code No. | Description | Unit | Rate in Rs. | |
|---------------|--|------|-------------|---------------|
| | | | Labour Rate | Complete Rate |
| 17.28.44 | Radiator Cooled & Turbo Charged /AC | | | |
| 17.28.43.2.1 | 25 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 350000.00 |
| 17.28.43.2.2 | 30 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 355000.00 |
| 17.28.43.2.3 | 40 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 390000.00 |
| 17.28.43.2.4 | 50 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 410000.00 |
| 17.28.43.2.5 | 62.5 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 470000.00 |
| 17.28.43.2.6 | 75/80 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 520000.00 |
| 17.28.43.2.7 | 125 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 680000.00 |
| 17.28.43.2.8 | 180 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 985000.00 |
| 17.28.43.2.9 | 250 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 1350000.00 |
| 17.28.43.2.10 | 320 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 1750000.00 |
| 17.28.43.2.11 | 500 KVA at 0.8 pf 415V 50Hz 3- ϕ | Each | | 2941000.00 |

17.29 INSTRUMENTS

| Code No. | Description | Unit | Rate in Rs. | |
|-----------|--|------|-------------|------------|
| | | | Labour Rate | Group I |
| 17.29.1 | Ultrasonic Flowmeter Open Channel type (Up to 5 Mtr Head rise) | 1.00 | 14576.89 | 194018.40 |
| 17.29.2 | Ultrasonic Flowmeter clamp on type | 1.00 | 50614.20 | 673675.00 |
| 17.29.3 | Magnetic flow meter | | | |
| 17.29.3.1 | 80mm/3" | 1.00 | 21595.39 | 287434.67 |
| 17.29.3.2 | 100mm/4" | 1.00 | 22945.10 | 305399.33 |
| 17.29.3.3 | (150mm/6") | 1.00 | 25644.53 | 341328.67 |
| 17.29.3.4 | 200mm/8" | 1.00 | 29693.66 | 395222.67 |
| 17.29.3.5 | 250mm/10" | 1.00 | 37791.94 | 503010.67 |
| 17.29.3.6 | (300mm/12") | 1.00 | 40491.36 | 538940.00 |
| 17.29.3.7 | 600mm/24" | 1.00 | 76933.58 | 1023986.00 |
| 17.29.3.8 | (700mm/28") | 1.00 | 85706.71 | 1140756.34 |
| 17.29.3.9 | (1000mm/40") | 1.00 | 128222.64 | 1706643.34 |
| 17.29.4 | Pressure switch (0 - 10 bar) | 1.00 | 1619.65 | 21557.60 |
| 17.29.5 | Pressure transmitters (0 - 10 bar) | 1.00 | 4723.99 | 62876.33 |
| 17.29.6 | Different Pressure Transmitters | | | |
| 17.29.6.1 | (6" orifice) | 1.00 | 1889.60 | 25150.53 |
| 17.29.6.2 | (12" orifice) | 1.00 | 6073.70 | 80841.00 |
| 17.29.6.3 | (28" orifice) | 1.00 | 19705.80 | 262284.13 |
| 17.29.6.4 | (40" orifice) | 1.00 | 33742.80 | 449116.67 |
| 17.29.7 | Level transmitters ultrasonic type | | | |
| 17.29.7.1 | (5 meters liquid) | 1.00 | 8908.10 | 118566.80 |
| 17.29.7.2 | (8 meters liquid) | 1.00 | 9987.87 | 132938.53 |
| 17.29.8 | Chlorine analyser | 1.00 | | |
| 17.29.8.1 | (Chlorine sensor) | | 10122.84 | 134735.00 |
| 17.29.8.2 | (Flow assembly) | | 6262.66 | 83356.05 |
| 17.29.8.3 | (Transmitter) | | 8908.10 | 118566.80 |

| Code No. | Description | Unit | Rate in Rs. | |
|------------|------------------------|------|-------------|-----------|
| | | | Labour Rate | Group I |
| 17.29.9 | Turbidity Analyser | 1.00 | | |
| 17.29.9.1 | (Turbidity Sensor) | | 28343.95 | 377258.00 |
| 17.29.9.2 | (Flow assembly) | | 4521.54 | 60181.63 |
| 17.29.9.3 | (Transmitters) | | 15521.69 | 206593.67 |
| 17.29.10 | pH Analyser | 1.00 | | |
| 17.29.11 | (Ph Sensor) | | 2618.44 | 34851.45 |
| 17.29.12 | (Ph cable , 10 meters) | | 1835.61 | 24431.95 |
| 17.29.13 | (Flow assembly) | | 4670.00 | 62157.75 |
| 17.29.14 | (Transmitters) | | 12822.26 | 170664.33 |
| 17.29.15 | Conductivity Analyser | 1.00 | | |
| 17.29.15.1 | (Conductivity sensor) | | 8530.18 | 113536.69 |
| 17.29.15.2 | (Transmitters) | | 8530.18 | 113536.69 |
| 17.29.16 | Pressure Gauges | | 202.46 | 2694.7 |

17.30 SOFT STARTER

| Code No. | Description | Unit | Rate in Rs. | |
|------------|---|------|-------------|-----------|
| | | | Labour Rate | |
| 17.30.1 | SITC of Soft Starters with panel conforming to applicable standards with logic inputs & outputs, relay outputs and analogue outputs, plug in I/O connections, display of electrical parameters, state of load & operating time, RS 485 serial link for connections to Modbus. | | | |
| 17.30.1.1 | 55 KW | EACH | 23377.01 | 311148.03 |
| 17.30.1.2 | 75 KW | EACH | 24638.99 | 327944.99 |
| 17.30.1.3 | 90 KW | EACH | 28539.66 | 379862.88 |
| | AC Drive | | | |
| 17.30.2 | SITC of VFd with panel conforming to applicable standards, with Graphical Display with atleast display of 5 different parameters at a time and display of 2 parameters with Bargraph, digital and analogue I/O, relay outputs, adjustable Accel/ Decel times, motor protection, RS 485 serial link for connections to Modbus. | | | |
| 17.30.2.1 | 0.75 KW | EACH | 11388.20 | 151576.88 |
| 17.30.2.2 | 1.5 KW | EACH | 11944.95 | 158987.30 |
| 17.30.2.3 | 2.2 KW | EACH | 12653.55 | 168418.75 |
| 17.30.2.4 | 3 KW | EACH | 13159.69 | 175155.50 |
| 17.30.2.5 | 4 KW | EACH | 13767.06 | 183239.60 |
| 17.30.2.6 | 5.5 KW | EACH | 15184.26 | 202102.50 |
| 17.30.2.7 | 7.5 KW | EACH | 16095.32 | 214228.65 |
| 17.30.2.8 | 11 KW | EACH | 18727.25 | 249259.75 |
| 17.30.2.9 | 15 KW | EACH | 19537.08 | 260038.55 |
| 17.30.2.10 | 18.5 KW | EACH | 20448.14 | 272164.70 |
| 17.30.2.11 | 22 KW | EACH | 22270.25 | 296417.00 |
| 17.30.2.12 | 30 KW | EACH | 26319.38 | 350311.00 |
| 17.30.2.13 | 37 KW | EACH | 27837.81 | 370521.25 |
| 17.30.2.14 | 45 KW | EACH | 35092.51 | 467081.33 |
| 17.30.2.15 | 55 KW | EACH | 37623.22 | 500765.08 |
| 17.30.2.16 | 75 KW | EACH | 42684.64 | 568132.59 |
| 17.30.2.17 | 90 KW | EACH | 49517.56 | 659078.71 |

17.33 PLC PANELS

| Code No | Description | Unit | Rate in Rs. | |
|---------|---|------|----------------|-----------|
| | | | Labour Charges | |
| 17.33.1 | Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 Mm X 700 MM X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration PC, necessary programming for SCADA software and comprising of all accessories not limited to the following: | 1.00 | 69240.23 | 921587.40 |
| | DI – 92 | | | |
| | DO – 92 | | | |
| | AI – 16 | | | |
| | AO – 8 | | | |
| | MCB 10A DP | 1 | | |
| | MCB 4A DP | 2 | | |
| | MCB SP 2A | 8 | | |
| | MCB 1A DP | 15 | | |
| | 24 VDC Power Supply 10A | 1 | | |
| | Push Buttons | 30 | | |
| | Selector Switch | 15 | | |
| | Control Relays | 200 | | |
| | Annunciator with 24 Windows NO to NC Type Microprocessor | 1 | | |
| | Based Series 1800, Window Size 75*42mm, 110VAC, with | | | |
| | Electronic Hooter | | | |
| | Control Transformer | 1 | | |
| | Emergency PB | 1 | | |
| | Panel Cooling Fan | 1 | | |
| | Panel Light with Door Switch | 1 | | |
| | Control Indication Lamp | 30 | | |
| | Box | 1 | | |
| | Wiring + TB etc | 1 | | |
| | Hardware | 1 | | |

| Code No | Description | Unit | Rate in Rs. Labour Charges | |
|------------|---|------|----------------------------------|-----------|
| 17.33.2 | Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 Mm X 700 MM X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration PC, necessary programming for SCADA software and comprising of all accessories not limited to the following: | 1.00 | 62896.58 | 837153.47 |
| | DI – 76 | | | |
| | DO – 76 | | | |
| | AI – 8 | | | |
| | AO – 4 | | | |
| | MCB 10A DP | 1 | | |
| | MCB 4A DP | 2 | | |
| | MCB SP 2A | 8 | | |
| | MCB 1A DP | 15 | | |
| | 24 VDC Power Supply 10A | 1 | | |
| | Push Buttons | 20 | | |
| | Selector Switch | 15 | | |
| | Control Relays | 200 | | |
| | Annunciator with 24 Windows NO to NC Type Microprocessor | 1 | | |
| | Based Series 1800, Window Size 75*42mm, 110VAC, with | | | |
| | Electronic Hooter | | | |
| | Control Transformer | 1 | | |
| | Emergency PB | 1 | | |
| | Panel Cooling Fan | 1 | | |
| | Panel Light with Door Switch | 1 | | |
| | Control Indication Lamp | 30 | | |
| | Box | 1 | | |
| | Wiring + TB etc | 1 | | |
| | Hardware | 1 | | |

| Code No | Description | Unit | Rate in Rs. | |
|---------|---|------|----------------|-----------|
| | | | Labour Charges | |
| 17.33.3 | Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 Mm X 700 MM X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration PC, necessary programming for SCADA software and comprising of all accessories not limited to the following: | 1.00 | 57497.73 | 765294.80 |
| | DI – 60 | | | |
| | DO – 60 | | | |
| | AI – 8 | | | |
| | AO – 4 | | | |
| | MCB 10A DP | 1 | | |
| | MCB 4A DP | 2 | | |
| | MCB SP 2A | 8 | | |
| | MCB 1A DP | 15 | | |
| | 24 VDC Power Supply 10A | 1 | | |
| | Push Buttons | 20 | | |
| | Selector Switch | 10 | | |
| | Control Relays | 200 | | |
| | Annunciator with 24 Windows NO to NC Type Microprocessor | 1 | | |
| | Based Series 1800, Window Size 75*42mm, 110VAC, with | | | |
| | Electronic Hooter | | | |
| | Control Transformer | 1 | | |
| | Emergency PB | 1 | | |
| | Panel Cooling Fan | 1 | | |
| | Panel Light with Door Switch | 1 | | |
| | Control Indication Lamp | 20 | | |
| | Box | 1 | | |
| | Wiring + TB etc | 1 | | |
| | Hardware | 1 | | |

Table

GUIDE LINES FOR CALCULATING ELECTRICAL LOAD ON PLINTH AREA BASIS*[Clause 4.2.3(b) of National Building Code]*

| <i>Type of Load</i> | <i>Load Requirement/Plinth Area (Watta/m2)</i> |
|---|--|
| Normal Lighting | 20 |
| lighting with lifts, pumps but without central air conditioning | 30 |
| Additinoal capacity for Technical buildings like laboratries, hospit:als etc. | 11 |

SWAGED STEEL POLE AS PER IS 2713(PART I II)-1980

| S.No. | Overall length (Mtr) | Planting depth below ground level(Mtr)/size of base plate(mm) | length(mtr)/OD(mm)/thickness(mm) | | | Weight of pole excluding base plate(Kg) |
|-------|----------------------|---|----------------------------------|----------------|----------------|---|
| | | | h1(top) | h2(middle) | h3(bottom) | |
| 1 | 7.5 | 1.25/300x300x5 | 1.5/76.1/3.25 | 1.5/88.9/3.25 | 4.5/114.3/3.65 | 67kg |
| 2 | 8.5 | 1.5/300x300x5 | 1.75/76.1/3.25 | 1.75/88.9/3.25 | 5.0/114.3/3.65 | 75kg |
| 3 | 9.0 | 1.5/300x300x5 | 2.0/76.1/3.25 | 2.0/88.9/4.05 | 5.0/114.3/4.50 | 92kg |
| 4 | 10.0 | 1.8/400x400x7 | 2.4/88.9/3.25 | 2.4/114.3/4.5 | 5.2/139.7/4.85 | 135kg |
| 5 | 11.0 | 1.8/400x400x7 | 2.7/88.9/3.25 | 2.7/114.3/4.5 | 5.6/139.7/4.85 | 147kg |
| 6 | 12.0 | 2.0/400x400x7 | 3.1/114.3/3.65 | 3.1/139.7/4.5 | 5.8/165.1/4.85 | 197kg |

OCTAGONAL POLES

| <i>SN</i> | <i>Overall length (mtr)</i> | <i>Size of base plate(mm)</i> | <i>TOP (mm)</i> | <i>BOTTOM (mtr)</i> | <i>THICKNESS (mm)</i> | <i>PCD (mm)</i> | <i>BOLT SIZE(no x mm)</i> | <i>FOUNDATION SIZE(mm)</i> |
|-----------|-----------------------------|-------------------------------|-----------------|---------------------|-----------------------|-----------------|---------------------------|----------------------------|
| | 7.0 | 240X240X16 | 76 | 150 | 3 | 240 | 4 X 20 | 450X 450X 1400 |
| 2 | 8.0 | 240X240X16 | 76 | 150 | 3 | 240 | 4 X 20 | 450X 450X 1550 |
| 3 | 9.0 | 275X275X16 | 100 | 200 | 3 | 290 | 4 X 20 | 450X 450X 1700 |
| 4 | 10.0 | 310X310X20 | 100 | 200 | 3 | 310 | 4 X 25 | 450X 450X 1900 |

AREA REQUIRED FOR TRANSFORMER ROOM AND SUB-STATION FOR DIFFERENT CAPACITY

[clause 4.2.4(v) of National Building Code]

| <i>S. No</i> | <i>Transformer Capacity (KVA)</i> | <i>Total Transformer Room Area (m2)</i> | <i>Total Substation Area (with HT LT Panels)</i> | <i>Suggested minimum Face Width (m)</i> |
|--------------|-----------------------------------|---|--|---|
| 1 | 1x60 | 14 | 90 | 9 |
| 2 | 2x160 | 28 | 118 | 13.5 |
| 3 | 1x250 | 15 | 91 | 9 |
| 4 | 2x250 | 30 | 121 | 13.5 |
| 5 | 1x400/500 | 16.5 | 93 | 9 |
| 6 | 2x400/500 | 33 | 125 | 13.5 |
| 7 | 2x630 | 36 | 132 | 14.5 |
| 8 | 2x1000 | 39 | 149 | 14.5 |

ABBREVIATIONS

| <i>ABBREVIATION</i> | <i>DESCRIPTION</i> |
|---------------------|--|
| A | Ampere |
| ACB | Air circuit breaker |
| ACSR | Steel reinforced Aluminium conductor |
| AH | Ampere hour |
| APFC | Automatic Power factor Correction |
| AVM | Anti vibration mounting |
| AWG | American wire guage |
| BHP/ HP | Break horse power |
| CFL | Compact fluorescent lamp |
| CFM | Cubic feet per minute |
| CI | Cast iron |
| CP | Chrome plated |
| CPRI | Central Power Research Institute |
| CRT | Cast resin type |
| CT | Current transformer |
| DB | Distribution board |
| DG | Diesel generator |
| DISCOMs | Distribution companies |
| DMC | Dough moulded compound |
| DO | Drop out |
| DP | Double pole |
| EB | Electronic Ballast |
| EDO | Electrically draw out |
| ETDC | Electronic Test and Development Centre |
| FIA | Fire Insurance approval |
| FR | Fire/ Flame retardant |
| FRLS | Fire/ Flame retardant and low smoke |

| <i>ABBREVIATION</i> | <i>DESCRIPTION</i> |
|---------------------|--|
| FTL | Ffluorescent tubelight linear |
| GLS | General lighting service |
| GO | Gang operating |
| GSS | Galvanised Sheet steel |
| HBC | High breaking capacity |
| HDPE | High density poly ethylene |
| HPMV | High pressure mercury vapour lamp |
| HPSV | High pressure sodium vapour lamp |
| HR | Heat resistant |
| HT/ HV | High tension/ voltage |
| I/O | Information outlet |
| IDU/ ODU | Indoor/ outdoor unit |
| IEC | International Electro technical commission |
| IP | Ingress protection |
| IS | Indian Standard |
| ISI | Indian standard institute |
| ITC | Installation, testing and commissioning |
| ITD | Indian telecom department |
| KVAR | Reactive kilo volt-ampere |
| KW | Kilo watt |
| LA | Lightning arrester |
| LAN | Local area networking |
| LCD | Liquid crystal display |
| LED | Light emitting diode |
| LPM | Litre per minute |
| LT/ LV | Low tension/ voltage |
| LTC | Load tap changer |
| mA | Milli ampere |
| MCB | Miniature circuit breaker |
| MCCB | Moulded case circuit breaker |

| <i>ABBREVIATION</i> | <i>DESCRIPTION</i> |
|---------------------|--|
| MDO | Manually draw out |
| MH | Metal halide |
| MM | Milli meter |
| MPP/ MP | Metalised poly propelyne/ Paper |
| MS | Mild steel |
| MVA | Mega volt ampere |
| NO/ NC | Normally open/ closed |
| NRV | Non-return valve |
| O/L | Over load |
| OCCB | Open Construction Copper Ballast |
| OD/ ID | Outer / Inner diameter |
| P. POINT | per point |
| PA | Public address |
| PC | Poly carbonate |
| PE | Poly ethylene |
| PF | power factor |
| PF/ P&F/S&F/SF | Providing and fixing/ Supplying and fixing |
| PIJF | Polypropylene insulated jelly filled |
| PRV | Pressure release valve |
| PU | Poly urethane |
| PUF | Poly Utherene floride foam |
| PVC | Poly Vinyl Chloride |
| R. Mtr. | Running meter |
| RCBO | Residual circuit breaker with over load protection |
| RCC | Reinforced cement concrete |
| RCCB | Residual current circuit breaker |
| REC | Rural electrification commission |
| RPM | Revolution per minute |
| RRL | Reinforced Rubberised line |
| S/C | Short circuit |

| <i>ABBREVIATION</i> | <i>DESCRIPTION</i> |
|---------------------|---|
| SF6 | Sulfer hexa floride |
| SITC | Supply, installation, testing and commissioning |
| SMF | Sealed maintenance free |
| SQ MM | Square millimeter |
| SWG | Standard wire gauge |
| SWH | Storage water heater |
| TAC | Tarrif advisory committee |
| TEFC | Totally enclosed flame proof container |
| THD | Total harmonic distortion |
| TP | Triple pole |
| TPN | Triple pole and neutral |
| UL | Underwriters laboratories |
| UPS | Uninterrupted power supply |
| UV | Ultra Violet |
| UVR | Under voltage release |
| V/ KV | Volts/ Kilo volts |
| VA/ KVA | Volt ampere/ Kilo volt-ampere |
| VCB | Vaccume circuit breaker |
| VPIT | Vacume Pressurised impregnated |
| XLPE | cross linked poly ethylene |
| ZHFR/ HFFR | Zero halogen/ Halogen free flame retardant |

List of Makes

| S.No. | ITEM | MAKE CAT-1 | MAKE CAT-2 |
|-------|--|--|---|
| 1. | PVC Casing Capping (Heavy duty) | Clipsal, Salzer, AKG, Prestoplast, Precision, polycab | Shrinath, Pressfit Polypack, Zeelite, Plastoduct, Sanco |
| 2. | PVC conduit | AKG, BEC, Precision, Clipsal, Polypack, Shrinath, Polycab | Prestoplast, Plaza, Nihir, Jindal, Kinjal, Sanco, Pressfit & any other approved ISI marked make |
| 3. | Steel Conduit | AKG, BEC, Steel Kraft | MST or Any Other approved ISI marked make |
| 4. | Copper conductor, Aluminium conductor | Rallison, RR Kabel, Polycab, Finolex, National, RPG, Delton, Havell's, KEI | Anchor, L&T, Standard, Plaza, Rajnigandha, Romex, Metro, Rajtex, Ekta, Ashocab, Insucon(Decon), Vimal Power, SMIC, Mr. Safety, Ramson, Powercab, JMP, Indo Asian, Tambi, Sunbrite super, Samflex, Empire, Padam |
| 5. | Coaxial cable | Delton, Finolex, National, KEI | RR Kabel, Polycab, Havell's, Eminent |
| 6. | Unarmoured telephone cable | Delton, Finolex, National, KEI | RR Kabel, Polycab, Havell's, Eminent |
| 7. | Armoured telephone cable | Birla Ericsson, Delton, Sterlite, Finolex, National, KEI | Havells, Polycab, Samflex |
| 8. | Synthetic phenolic laminates | Hylam, Formica | Greenlum, Anchor, Capital |
| 9. | MCB, isolator, RCCB, DBs, VTPN DBs, enclosures | Legrand(Lexic), ABB, Merlin Gerin(Multi 9), Hager, Siemens, Moeller(HPL), GE(G2000) | Havells, Standard, Gerard(Mr. Safety), Merlin Gerin(Protec), HPL(Techno), Altech, Datar, Legrand(Load kontakt), Indoasian, Geco, SSK |
| | Metal clad industrial plug top & socket | | |
| 10. | Pin & Sleeve type | Siemens, Hager, Havells, Standard, HPL, GE, Legrand, Schneider(Merlin Gerin), ABB, BCH, Moeller (HPL), Indoasian, Gewiss | Standard Gold, Capital, Geco, Millborn |

| S.No. | ITEM | MAKE CAT-1 | MAKE CAT-2 |
|--------------|--|---|---|
| 11. | Butt type | BCH, SCAME, Gewiss | Standard gold, Millborn |
| 12. | Self Extinguishable Polymer type | Merlin Gerin, Legrand, Clipsal, HPL, Neptune Bals, ABB, SCAME, Indo Asian | Standard gold |
| | Electrical Accessories | | |
| 13. | Surface Type ordinary accessories | SSK, Anchor | Vinay, Kinjal, Leader, Antex |
| 14. | Flush Type Ordinary Accessories | SSK(Topline), Anchor(Penta-Ornet), Precision(Prime), Vinay(Clair-30), Cona(Nice-Indian), Elle(Camel), Antex(LK), North-West(R-series) | SSK(Lica), Anchor(Delux), Magic(Budget), Vinay(Clair-20), Alemac(Santro), Antex(King), Kinjal(Alpha) |
| 15. | Accessories other than Switch / Socket | SSK, Anchor, Precision, Vinay, Cona, Elle, North-West | Alemac, Antex, Kinjal, |
| 16. | Bells | Cona, Max, Anchor | SSK, Magic, Vinay, Elle, Leader |
| 17. | Modular (PC Series) | MK (Wrap around/ plus), LK (Fuga), Clipsal, Legrand(Mosaic), North West(PC Plus), ABB(Classiq Lumina), Gewiss(System) | Havells (Crabtree), Anchor(Roma), Cona(glamour), Leon (Premier), Vinay(Camry), Precision(Accord), SSK(Signature-EL), Elleys, Legrand(MyLinc), Hausmann, Elle(High class), MK(Ivory) |
| 18. | Semi – Modular (P.C. Series) | Anchor(Nova), Precision(Z), SSK (Fantasy), Vinay(Corsa), Elle(Excel) | Elle(Hi Fi), Antex (Euro), SG(Ikon) |
| 19. | PVC trunking system | MK, Legrand(DLP), Schneider | ----- |
| 20. | Stabilizers | Logistat, Miracle | Shakti, Elnova, Bhurji, IPS |
| | Volt meters, Ampere meters | | |
| 21. | Analog type meters | Meco, ESSVEE, Rishab, Moeller(HPL) | Capital, Standardgold, AE, IMP, Millborn |
| 22. | Digital type meters | Enercon, Diris, L&T, Moeller(HPL) | Meco, Standardgold, ESSVEE |

| S.No. | ITEM | MAKE CAT-1 | MAKE CAT-2 |
|-------|--|---|---|
| 23. | Current Transformer | C&S, L&T, Schneider, Siemens | Alfa, AE, Jyoti, Kappa, Millborn, Vaishno, Standardgold |
| 24. | Selector switches | GE, Siemens, C&S, HPL, L&T(Selzer), ABB, Moeller | Standardgold, Millborn, Geco, ESSVEE |
| 25. | LED (22.5 mm dia) Pilot lamp | Siemens, C&S, GE, ESBEE(L&T), BCH, ABB, Moeller | Standardgold, HPL, ESSVEE |
| 26. | Energy analyser | Neptune Ducati, HPL Diris, Enercon, L & T, Schneider-MG | |
| | Self healing MPP/MP type shunt capacitor | | |
| 27. | Standard duty | EPCOS, L&T(MPPS), GE, Neptune-Ducati(NSL-10), ABB | BCH |
| 28. | Heavy duty | GE, EPCOS(HDDD), L&T(MDXL), Neptune-Ducati(LL-10), ABB | Motif, Millborn, BCH |
| 29. | Gas filled | EPCOS, GE, ABB, Neptune Ducati, Vishay ESTA | BCH |
| | Power factor correction relay | | |
| 30. | sensitivity up to 50 milli Amp | BELUK, EPCOS, ENERCON (Circuitor), GE, Sycon Neptune(Phasetrac), ABB, GE, Vishay ESTA | BCH |
| 31. | sensitivity more than 50 milli Amp | L&T, Neptune Ducati, Vishay ESTA, BCH, Sycon | |
| 32. | Cam operated rotary switches | GE, Siemens, C&S, HPL, L&T(Selzer) | Standardgold, Sudhi, Millborn |
| 33. | Power contactors, Thermal over load relays | Siemens, ABB, BCH, Telemecanique (Schneider), SprecherSchuh, GE, L&T, C&S, Indoasian (Lovato), Moeller(HPL) | Havell's, Standardgold, Millborn, PECO |

| S.No. | ITEM | MAKE CAT-1 | MAKE CAT-2 |
|-------|---|--|---|
| 34. | Capacitor (AC 6 B) duty contactor | Siemens, ABB, Telemecanique (Schneider), Sprecher Schuh, GE, C&S(TC), Moeller, L&T | Havell's, BCH, Millborn |
| 35. | Voltage surge protection device (surge arrester) | Schneider MG, Siemens, Hager, Legrand, GE, ABB, Moeller(HPL) | |
| 36. | Push button actuators | Siemens, C&S, GE, ESBEE(L&T), BCH, ABB, Moeller(HPL) | Standardgold, ESSVEE, Millborn |
| 37. | Mechanical / digital time switch | Legrand, L&T, GE, Schneider, Siemens, Hager, Moeller(HPL), ABB, Theben(Indo Asian) | |
| 38. | Static watt-hour meter (kwh meter) | Enercon, Anchor, Havell's , L&T, HPL | Standardgold, Genius |
| 39. | Cable junction boxes | Hensel, Clipsal, SCAME, Gewiss, Moeller(HPL), Fibox | United |
| 40. | Static release Air Circuit Breaker | ABB, Siemens, GE, L&T, Merlin Gerin, Moeller(IZM) | C&S |
| 41. | MICRO-PROCESSOR release Air Circuit Breaker | Merlin Gerin, ABB, Siemens, GE, Moeller(IZM), L&T | C&S |
| 42. | Thermal magnetic release Air Circuit Breaker | Merlin Gerin, ABB, Siemens, GE, Moeller(IZM), L&T | C&S |
| 43. | MCCB | Merlin Gerin, ABB, L&T, Siemens, Legrand, GE, Moeller(NZM), C&S, BCH | Havell's, Indo Asian, Standard |
| 44. | Metal clad Rewire able porceline switch fuse unit | SSK, Standard, Havells, HPL, Indo Asian | Geco, Mex, Osiya, Millborn, Kumar, Capital, Anchor, Standard gold |
| 45. | Switch disconnecter fuse unit | GE, ABB, Siemens, L & T, HPL, C&S, BCH, Merlin Gerin, Indoasian | Standard, Havell's, Standard gold, Geco |

| S.No. | ITEM | MAKE CAT-1 | MAKE CAT-2 |
|-------|--|---|--|
| 46. | Onload change over switch | HPL (Socomac), Gerard(Elcon), GE, L&T, C&S, ABB | Havell's, Standard, Indo Asian, Standard gold, Crystal |
| 47. | Off load change over switch | Standard, Hevell's, HPL, Gerard, Indo Asian | Standard gold, Mex, Osiya, Capital, Zeta, Kumar, Geco, Millborn, Crystal |
| 48. | LT Cables | Rallison, National, ICL, Gloster, RPG, Delton, Polycab, Unistar, Havell's, KEI, Gems Cab, MPCAB | Grandlay, Ekta, Romex, Westin, Rajtex, Plaza, Torrent, Insucon, Ashocab, Cap Cab, Vimal Power, Metro, Ramson, Powercab, Rajanigandha, Samflex, Deelux premium, Empire, JMP |
| 49. | Single compression brass gland SIBG type | Gripwel, Comet, Metalcraft, Cabend, TRINITY TOUCH | |
| 50. | Aluminium lugs | Jainson, Dowells, Elcon, Metalcraft, Cabend, TRINITY TOUCH | |
| 51. | Outdoor straight through joint | Reychem, Denson, M-Seal, Sasfe-kit | |
| 52. | M.S.Cable tray | Veenus, Pasco | |
| 53. | XLPE insulated H.T.cable | ICL, Gloster, RPG, Polycab, Unistar, KEI, Havells, MPCAB | Capcab, Torrent, Grandlay, Plaza, Gemscab or any other approved ISI marked make. |
| 54. | Heat shrinkable type indoor/ outdoor/ straight through terminations/ joint | Raychem, Densons, M-seal | Safekit, Master seal |
| 55. | Push-on type indoor/ outdoor terminations/ joint | Densons, M-seal | Safekit, Master seal |
| 56. | Ceiling Fans | Clipsal, Almonard, Alstom, CG, Khaitan, Bajaj, Usha, Orient, Ortem | EPC, MMI, Airteck, Kraft, Polar, Orison, Rajshree, Relaxo, MIE, Kumar, Anchor, Havell's |
| 57. | Fresh Air Fans | Clipsal, Almonard, Alstom, CG, Khaitan, Bajaj, Usha, Remi, EPC | MMI,MIE, Airteck, Kraft, Polar, Orison, Anchor |

| S.No. | ITEM | MAKE CAT-1 | | MAKE CAT-2 |
|-------|--|---|---|--|
| 58. | Exhaust Fans | Alstom, CG, Almonard | | Clipsal, Khaitan, Bajaj, Usha, EPC, Remi |
| 59. | Wall Mounting / Cabin / Pedestal Fans | Almonard, CG, Khaitan, Bajaj, Usha, EPC, Remi | | Orient, MMI, Airteck, Kraft, Polar, MIE |
| 60. | Ceiling Fans | Almonard | | CG, Khaitan |
| 61. | Ventilation Fans | Newtek, Almonard, CG | | Remi, Usha, Khaitan, Bajaj |
| 62. | Storage Water Heater and accessories | Spherehot, Racold, Venus | | Bajaj, CG, Usha, Almonard |
| 63. | Solar heating system | TATA BP, BHEL, REIL, NIILOY | | |
| | Indoor Lighting | Group A 1 | Group 1 | Group 2 |
| 64. | Indoor Fittings | Philips, Trilux | CG, Bajaj, Wipro, Asian, Havell's | Twinkle, Compa ct, Valiant, Shakti, Indo Asian, Pierlite, Gewiss, Prim |
| 65. | FTL Lamps | Philips, Osram | CG, Bajaj, Wipro | Indo Asian, Pierlite, Surya |
| 66. | CFL Lamps | Philips, Osram | CG, Bajaj, Wipro, Havell's | Eckolite (Indo Asian), Surya, Pierlite, HPL, Vapolite (Econ), Standard |
| 67. | Light sensing devices and Sensors | | Philips | Wipro |
| 68. | LED Luminaires and Supply | | Philips | Wipro |
| | Outdoor Lighting | Group A 1 | Group 1 | Group 2 |
| 69. | Outdoor Fittings | Philips Bajaj | Philips, Kaselec – Schreder, CG, Bajaj, Wipro, Havell's | Twinkle, Indo Asian, Shakti, Halomax, Gewiss, Pierlite, Kaselec, Valiant, United |
| 70. | HPSV Lamps | | Philips, Osram, Bajaj, CG, Wipro, Vapolite, Surya | |
| 71. | HPMV / Halogen Lamps | | Philips, Osram, CG, Bajaj, Wipro, Havell's, Vapolite, Surya | Milborn |

| S.No. | ITEM | MAKE CAT-1 | | MAKE CAT-2 |
|-------|--|---|--|---|
| | | Group A 1 | Group 1 | |
| 72. | MH Lamps | | Philips, Osram, CG, Bajaj, Wipro, Venture, Vapolite, Surya | Milborn |
| 73. | Hot Dipped GI Swaged Tubular/Octagonal Poles | | Philips Bajaj | SRB |
| 74. | Hisgh Mast Lighting System | | Philips Bajaj | SRB, K – lite, United, CG, BPP |
| 75. | LED Outdoor Luminaires | | Philips | Wipro |
| 76. | Decorative C.I. Poles | | Bajaj, Halomax | NDM, Raydean |
| 77. | HT Insulators (Pin, Disc and Post types) | Jaishree insulators, Allied ceramics, JP (Jaipur Glass & Potteries), IEC (Insulators and Electricals company Bhopal) | | |
| 78. | Horn gap fuse set, isolator (GO) | Star Industries(Jaipur), Elektrolites(Jaipur), Dusad Electricals, (Jaipur) | | |
| 79. | Lightening arrestor | OBLUM, ALPRO, LAMCO, ELEKTROLITES | | |
| 80. | LAN, UTP Wires | Amp, Avaya, D-link, Molex | | RRKabel, Finolex, Delton, Spectra, Legrand |
| 81. | Communication Racks | Avaya, Molex, Amp, Veropresident | | D-Link, Alcatel, WQ System, Legrand |
| 82. | I/Os, Patch cords, Patch Panels, Terminations | Avaya, Molex, Amp | | D-Link, Alcatel, WQ System, Legrand |
| 83. | Motors & Pump Sets | | | |
| 84. | Self Priming / Centrifugal Monoblock Pumpsets | Kirlosker, Texmo, Crompton, Taro, Siemens, ABB | | Sumo, Usha, Sharp, MBH |
| 85. | Submersible motor pump sets | KSB, Kirlosker, Texmo, Taro, Calama | | CG, CRI, Plugra, Lubi, KDR, MBH |
| 86. | Transformer & Accessories | Kirlosker, Alstom, Crompton Greaves, NGEF | | Uttam Bharat, Rajasthan Transformers and Switchgears, Kotsons, IMP, Voltamp, Indian, Runthla, United, Prakash |

| S.No. | ITEM | MAKE CAT-1 | MAKE CAT-2 |
|-------|-------------------------------------|--|------------|
| 87. | Batteries | Exide, Standard, Amarey's | |
| 88. | FCBC(Float cum boost charger) | Statcon, Amararaja, CDC | |
| 89. | SF6/ VCB Indoor type panel HT board | ABB, Alstom (Areva), Schneider | |
| 90. | Copper bus trunking arrangement | L&T(Moeller), Schneider, EAE(Alcu-Bar) | C&S, GE |
| 91. | HT Switch | Schneider, MEI | |
| 92. | Alternator | Stampford, Leroy-somer, Kirlosker-Green, CG, KEC, SAME | |
| 93. | Diesel Engine | Cummins, Penta-Volvo, Caterpillar, AshokLeyland, KOEL | |
| 94. | PLC | Allen Bradely, Enercon, ABB, Siemens, Schneider | |