

**MODIFICATION OF EXISTING A-320 SIMULATOR I BUILDING TO ACCOMMODATE ATR 72 - 212 SIMULATOR
AT CTE , FERROZGUDA , HYDERABAD**

BILL OF QUANTITIES

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|----------------------------------|---|-------------|------------|-------------|---------------|
| SUB HEAD I : POINT WIRING | | | | | |
| 1 | Supply ,Laying and Wire pulling,Testing and commissioning of the following for Point wiring and Lighting circuit Mains and Power circuit Mains.The Scope for point wiring includes supply and erection of Conduit pipe PVC as per IS 9537 - Part 3 and PVC insulated copper flexible cable as per IS 694 - 1990 and the necessary Junction boxes ,bends,covers etc and for Power circuit Mains the scope includes Supply and Laying of PVC pipe of required size and fixing clamps etc. For the supply and Erection of Power sockets 6A, 16A, the scope includes supply,erection of rated power socket with switch, front plate and Modular type Concealed metal Box for fixing the socket.For all the point wiring and Lighting/power circuit mains and power socket fixing whreever required civil work is included and after the completion of necessary fixing the chipped portion is to be plastered neatly.Wiring Installtion to be done as per IS 732 - 1989 Code of Practice for Electrical wiring Installation | | | | |
| a) | Wiring with 3 runs of 14/0.3mm (1.5 Sq.mm) Fire Retardant (FR) P.V.C. insulated flexible copper wire (ISI MARK) in suitable dia (not less than 20 mm) 1.6mm thick PVC pipe with 6 A modular switch, ceiling rose and suitable concealed anodized metal box and cover frame including all labour charges etc., complete for light in officeBuildings. | | | | |
| i) | One Light Point controlled by 6A Switch | Nos | 34 | | |
| ii) | Two Light Point controlled by 6A Switch | Nos | 5 | | |
| iii) | Three Light Point controlled by 6A Switch | Nos | 3 | | |
| iv) | One Exhaust fan Point controlled by 6A Switch | Nos | 2 | | |

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|-------|--|------|-----|------|--------|
| 2 | Supply ,Laying and testing and commissioning of wires and Suitable size 1.6 mm thick PVC Pipe including supply and erection of wires and pipes and pipe accessories for one flood light point controlled by one no 6 A MCB with ms sheet encloser with front cover etc with all accessories insutable size PVC conduit pipe with all necessary bends and junction boxes etc including civil works for Conduit laying and MCB box erection and plastering after the conduit laying. Also including the supply of 2 runs of 2.5 sqmm, 1 run of 1.5 sqmm copper conductor PVC insulate | Nos | 4 | | |
| 3 | Supply and Wiring of above but for 6A Socket on board | Nos | 4 | | |
| 4 | Supply, fixing of 6/16A , 5 Pin Shuttered switch & socket of Modular Type with Concealed metal Box and front plate for fixing of switch and socket including making connections etc complete (Make : :Legrand/MK/Anchor-Roma) | Nos | 15 | | |
| 5 | Supply, fixing of 6/16A , 5 Pin Shuttered switch & socket of Modular Type with Concealed metal Box and front plate for fixing of switch and socket including making connections etc complete (for AC Power Socket) | Nos | 4 | | |
| 6 | Supply, fixing of 2 Nos of 6/16A , 5 Pin Shuttered switch & socket of Modular Type with Concealed metal Box and front plate for fixing of switch and socket including making connections etc complete (for UPS Power Socket) | Nos | 12 | | |
| 7 | Supply and Laying of 2 Runs of 2.5 Sqmm and 1 run of 2.5 sq mm 1100V grade FRLS PVC insulated multistrand copper conductor wire for Lighting Main circuit from DB to switch box in suitable size heavy gauge pvc conduit with all necessary accessories like junction boxes,bends etc complete including civil works . | Rmt | 300 | | |
| 8 | Supply and Laying of 2 Runs of 4 Sqmm and 1 run of 2.5 sq mm 1100V grade FRLS PVC insulated multistrand copper conductor wire for 16A Power Main circuit from DB to switch box in suitable size heavy gauge pvc conduit with all necessary accessories like junction boxes,bends etc complete including civil works . | Rmt | 600 | | |
| 9 | Supply and Laying of 2 Runs of 6 Sqmm and 1 run of 6 sq mm 1100V grade FRLS PVC insulated multistrand copper conductor wire for 16A Power Main circuit from DB to switch box in suitable size heavy gauge pvc conduit with all necessary accessories like junction boxes,bends etc complete including civil works . | Rmt | 700 | | |
| 10 | Supply and laying of 4 runs of 10 Sq.mm and 2 runs of 6 Sq.mm multistrand 1100V grade FRLS Copper conductor wires in and including 40 mm dia heavy gauge PVC conduit including accessories and also including civil works. | MTR | 100 | | |

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|-----------------------------|--|------|-----|------|--------|
| 11 | Supply and laying of 2 runs of 10 Sq.mm and 1 runs of 6 Sq.mm multistrand 1100V grade FRLS Copper conductor wires in and including 40 mm dia heavy gauge PVC conduit including accessories and also including civil works. | MTR | 60 | | |
| 12 | Supply, fixing of dust and vermin proof 8way TPN DB with one number of 63 A 4pole MCB with 100 mA ELCB as Incomer and 6 – 32A SP MCBs 24 Nos as out goings. | Nos | 1 | | |
| 13 | Supply, fixing of dust and vermin proof 4way TPN DB with one number of 63 A 4pole MCB as Incomer and 6 – 32A SP MCBs 12 Nos as out goings. | Nos | 1 | | |
| 14 | Supply, fixing of dust and vermin proof 12way SPN DB with one number of 63 A ,DP MCB as Incomer and 6-20A MCBs 10 Nos as out goings. | Nos | 2 | | |
| 15 | Supply, fixing of dust and vermin proof 125A MCCB and MS sheet encloser, with neutral basbar. | Nos | 1 | | |
| 16 | Supply, fixing of dust and vermin proof 100A MCCB and MS sheet encloser. | Nos | 1 | | |
| 17 | Supply, fixing of dust and vermin proof 40A MCCB and MS sheet encloser. | Nos | 1 | | |
| 18 | Supply, fixing of dust and vermin proof 25A MCCB and MS sheet encloser. | Nos | 1 | | |
| 19 | Supply, fixing of dust and vermin proof 16A MCCB and MS sheet encloser. | Nos | 3 | | |
| 20 | Supply, Installation, Testing, Commissioning and Handing over of 3 Star rating Hi-Wall mounted Indoor & Outdoor Condensing unit Rotary type Compressor, operation on Refrigerent R-22 suitable for operation on 230V, 50Hz, Single phase AC supply capable of performing Cooling, Dehumidifying, Air circulating and Filtering with 4 KVA Stabilizer, cordless remote controller with LCD Display, communication cables, control cable from indoor unit to outdoor unit etc as necessary and mounting stand for outdoor unit with all accessories. | | | | |
| a) | 2 TR | Nos | 4 | | |
| SUBHEAD I TOTAL | | | | | _____ |
| SUB HEAD II : CABLES | | | | | _____ |

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|-------|--|------|-----|------|--------|
| 1 | Supply ,Laying ,Testing and commissioning of 1.1 KV grade XLPE insulated armoured alluminium conductor cables below the ground from feeder pillar to above DB including two end terminations and suitable single compression type glands, the scope of work includes excavation , supply and laying of cable protection with bricks and backfilling of soil complete including cable markers at 50 mtr interval. | | | | |
| a) | 3.5 c x 185 sq mm ayfy cable | Rmt | 200 | | |
| b) | 3.5 c x 120 sq mm ayfy cable | Rmt | 50 | | |
| c) | 3.5 c x 50 sq mm ayfy cable | Rmt | 40 | | |
| d) | 3.5 c x 35 sq mm ayfy cable | Rmt | 40 | | |
| e) | 3.5 c x 25 sq mm ayfy cable | Rmt | 40 | | |
| f) | 4 c x 16 sq mm ayfy cable | Rmt | 450 | | |
| 2 | Supply and laying of 50 mm Dia Class B G.I Pipe on wall /in earth including excavation and back filling upto a depth of 600 mm. | Rmt | 10 | | |
| 3 | Suppy,Installation of maintanace free chemical Earth Station(maintane the earth resistance at less than 1 ohm) including excavation,back filling and construction of earth chamber.The scope includes civil work like excavation,back filling and construction earth pit as per IS 3043. | Nos | 6 | | |
| 4 | Supply and laying of 8SWG GI Wire including all necessary interconnections. | Rmt | 400 | | |

SUBHEAD II TOTAL

SUB HEAD NO III ; EXTERNAL ELECTRIFICATION (panels)

| | | | | | |
|----|--|-----|---|--|--|
| 1 | Supply ,erection testing, commissioning and fabrication of floor mounting type cubical panel of 14 SWG CRCA sheet enclosure with Aluminium Bus Bar ,(0-500v) voltmeter with selector switch & also with Ammeter with selector switch and CT coils , indicating lamps with KWH Meter and also with the following switch gear as per Drawing | | | | |
| a) | EMM ROOM PANEL - INDOOR | Nos | 1 | | |
| | Incomer : 400 A, 50 KA , 4Pole MCCB with Microprocessor based Overload , short circuit and earth fault Protection - 1 No.(make: Legrand/L&T/ABB (model no:DPX. 630 lcu-36kS – cat.no-025627 of Legrand make or Equivalent) | | | | |
| | 0-500V Digital Voltmeter with Switch - 1 set | | | | |

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|-----------|---|------|-----|------|--------|
| | 0-400A Digital Ameter with switch - 1 set | | | | |
| | Led Phase indication Lamps - 1 Set | | | | |
| | 2A Control fuses - 3 no"s | | | | |
| | Three Phase 4 Wire Energy meter - 1No | | | | |
| | 400/5A class 1, 15va tape wound CT"s 3 no | | | | |
| | Outgoings : | | | | |
| | 125 A , 36KA, MCCB , TPN -1 No.s(dpx.125, lcu-36ka – cat.no-625355) - 1 No | | | | |
| | 100 A , 36KA, MCCB , TPN -1 No.s(dpx.125 lcu-36ka – cat.no-625354) - 1 No | | | | |
| | 63 A , 25KA, MCCB , TPN -2 No.s(dpx.125 lcu-36ka – cat.no-625361) | | | | |
| | 40 A , 16KA, MCCB , TPN -1 No.s(dpx.125 lcu-36ka – cat.no-625352) | | | | |
| | 32 A , 16KA, MCB , TPN – 11 No.s(lcu-16ka – cat.no-603305) | | | | |
| | 25 A , 16KA, MCCB , TPN -2 No.s(dpx.125 lcu-16ka – cat.no-625317) | | | | |
| | 16 A , 16KA, MCCB , TPN -8 No.s(dpx.125 lcu-16ka – cat.no-025016) | | | | |
| | TOTAL AMOUNT | | | | |
| b) | AIRCONDITIONING PANEL - INDOOR | | Nos | | |
| | Incomer : 400 A, 36 KA , 4Pole MCCB with Microprocessor based Overload , short circuit and earth fault Protection - 1 No.(DPX 630 lcu-36kA – cat.no-025627) | | | | |
| | 0-500V Digital Voltmeter with Switch - 1 set | | | | |
| | 0-400A Digital Ameter with switch - 1 set | | | | |
| | Led Phase indication Lamps - 1 Set | | | | |
| | 2A Control fuses - 3 no"s | | | | |
| | Three Phase 4 Wire Energy meter - 1No | | | | |
| | 400/5A class 1, 15va tape wound CT"s 3 no | | | | |
| | Outgoings : | | | | |
| | 250 A , 36KA, MCCB , TPN -1 No.s(dpx.250 ER, lcu-36ka – cat.no-025236) | | | | |
| | 160 A , 36KA, MCCB , TPN – 1 No.s(lcu-36ka – cat.no-025625) | | | | |

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|--|---|------|-----|------|--------|
| | 32 A , 16KA, MCB , TPN – 11 No.s(lcu-16ka – cat.no-603305) 16 A , 16KA, MCCB , TPN -3 No.s(dpx.125 lcu-16ka – cat.no-025016) | | | | |
| SUBHEAD IV : MODIFICATION WORKS | | | | | |
| 1 | NEW PANEL FOR EXISTING 630 KVA TRANSFORMER | Nos | 1 | | |
| | Incomer : 1000 A, 50 KA , 4Pole ACB with Microprocessor based Overload , short circuit and earth fault Protection - 1 No 0-500V Digital Voltmeter with Switch - 1 set 0-400A Digital Ameter with switch - 1 set Led Phase indication Lamps - 1 Set 2A Control fuses - 3 no"s Multi Function Meter | | | | |
| | Outgoings | | | | |
| | 400/5A class 1, 15va tape wound CT"s 3 no 1000A,50kA ,TP ACB- 1 No 250A,35kA ,TP MCCB- 2 No 200A,35kA ,TP MCCB- 1 No 400A,50kA ,TP MCCB- 1 No 63A,50kA ,TP MCCB- 1 No 630A,50kA ,TP MCCB- 1 No 250A,35kA ,TP MCCB- Spare 1 No 100A,25ka,TP MCCB - Spare 1 No 63A,16kA ,TP MCCB- Spare 1 No | | | | |
| | Bus Bars : Copper | | | | |
| 2 | NELCO UPS/HYDRAULIC PANEL | Nos | 1 | | |
| | Incomer : 400 A, 50 KA , 4Pole MCCB with Microprocessor based Overload , short circuit and earth fault Protection - 1 No 0-500V Digital Voltmeter with Switch - 1 set 0-400A Digital Ameter with switch - 1 set Led Phase indication Lamps - 1 Set 2A Control fuses - 3 no"s Multi Function Meter | | | | |
| | Outgoings | | | | |
| | 250A,35kA ,TP MCCB- 2 N 63A,50kA ,TP MCCB- 8 N | | | | |
| | Bus Bars : Copper | | | | |
| 3 | Removal of Existing 630KVA Transformer M.V.Panel & Nelco UPS/Hydraulic panel, including the removal of Incoming and outgoing cable Glands and Terminations removal. Removal of Earthing connections etc and handing over the same to the Stores of client. | LS | 1 | | |
| SUBHEAD III TOTAL | | | | | |

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|-------|-------------|------|-----|------|--------|
|-------|-------------|------|-----|------|--------|

SUB HEAD NO V ; LIGHT FIXTURES

Supply,Installation,Testing and commissioning of the following Light Fittings and Electrical accessories including the supply of bulbs and including the supply of fixing brackets.

| | | | | | |
|---|---|-----|----|--|--|
| 1 | 1 X 36 W Indoor decorative luminaire suitable for T5 Single 4' Fluorescent tube Light Fixture .(Philips Cat No.TBS050 1XTLD36W IC MI) | Nos | 5 | | |
| 2 | 2 x 36W Recess mounted CFL light Fixture.(Bajaj Cat BCDI 236 CFL LHD) | Nos | 28 | | |
| 3 | 2 x 28 W Recess mounted mirror optic Fluorescent light Fixture.(Bajaj Cat : BTDL 228) | Nos | 12 | | |
| 4 | Supply,Installation ,Testing and commissioning of 305 mm Sweep Single phase metal blades exhaust fan with Louvers and also including fixing accessories | Nos | 2 | | |
| 5 | 2 X 250 W Non Integral metal halide Wall mounting adjustable Flood light fixture including Controlgear and fixing clamps. | Nos | 4 | | |
| 6 | Miscellaneous equipment and parts, new Aluminium ladder (6 mtrs), and removing of old cables,CB"s, old lighting fixtures etc complete. | Nos | 1 | | |

SUBHEAD V TOTAL

SUB HEAD VI ; MISCELLANEOUS ITEMS

| | | | | | |
|---|--|------|-----|--|--|
| 1 | Supply and laying of 70Sq.mm Cu Flex for Earthing | Mtrs | 111 | | |
| 2 | Supply and laying of 4C x 6Sq.mm Cu Ar Cable for chiller pumps starter units | Mtrs | 56 | | |
| 3 | Supply and laying of 3C x 6 Sq.mm Cu Ar Cable for chiller pumps | Mtrs | 110 | | |
| 4 | Supply and laying of 3C x 4 Sq.mm Cu Ar Cable for AHU motors | Mtrs | 86 | | |

| SL.NO | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|-------|---|------|------|------|--------|
| 5 | Supply and laying of 3C x 2.5 Sq.mm Cu Ar Cable AC Compressor | Mtrs | 75 | | |
| 6 | Supply and laying of 3C x 1.5 Sq.mm Cu Ar Cable AHU Limit switch | Mtrs | 86 | | |
| 7 | Supply and laying of 3C x 2.5 Sq.mm Cu Flex Cable for Flood lights | Mtrs | 40 | | |
| 8 | Supply and laying of 40 x 6mm Cu Flat | Mtrs | 50 | | |
| 9 | Supply and laying of 50 x 6mm GI Flat | Mtrs | 164 | | |
| 10 | Supply and laying of 25 x 3mm GI Flat | Mtrs | 310 | | |
| 11 | Supply and Instalation of Earth Bus | Nos | 3 | | |
| 12 | Supply and errection of 300mm cable tray with cover | Mtrs | 62.8 | | |
| 13 | Supply and errection of 100mm cable tray with cover | Mtrs | 10 | | |
| 14 | Supply and errection of 50 x 6mm MS Angels supports for Flood light fixtures supports | Nos | 4 | | |
| 15 | Supply, Installation, Testing and commisioning of 63A FP MCCB for NE DB as Incommer | Nos | 1 | | |
| 16 | Supply, Installation, Testing and commisioning of 63A TP MCB Metal Enclosure box | Nos | 1 | | |

SUBHEAD VI TOTAL

SUB HEAD I : POINT WIRING

SUB HEAD II : CABLES

SUB HEAD NO III ; EXTERNAL ELECTRIFICATION (panels)

SUBHEAD IV : MODIFICATION WORKS

SUB HEAD NO V ; LIGHT FIXTURS

SUB HEAD NO VI ; MISCELLANEOUS ITEMS

GRAND TOTAL

(Rupees in words

Signature of the Contractor

Date :

Address of the Contractor: