



- 15. a) 3-ph, 415V, 50Hz, 15HP and 10HP squirrel cage motors are to be installed in a workshop of 9m X 6m. Determine the rating of main fuse switch, each motor control switch, Cable sizes from meter board to the each motor terminal and draw i) a floor plan of placing these machines. ii) Electrical circuit wiring diagram. [7]
- b) Why starter is necessary for a motor? [3]
- 16. a) Explain about CTS cable with neat sketch and give its advantages & disadvantages. [5]
- b) Explain about MCB with neat sketch. [5]
- 17. Answer any *two* of the following:
  - a) An auditorium of 15m X 6m X 4.5m height is to be fitted with fan and light points. The illumination required is 10W/m<sup>2</sup> and the numbers of fans are four of 60W each. Calculate the number of lamps with wattage. Draw schematic arrangement of lamps and fans. [5]
  - b) If the Connected load of a hotel is 18.125KVA, Calculate the size of Service Power Cable require. [5]
  - c) A lathe shop of 15m X 30m has to be equipped with 5HP, 3HP & 1HP, 3-ph, 415V, 50Hz motors. Determine the rating of main fuse switch, each motor control switch, Cable sizes from meter board to the each motor terminal. [5]

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