



9. The maximum distance to be travelled by an occupant to reach an exit door in Business (or) Commercial buildings should be  
(a) 22.50 m                      (b) 30m                      (c) 45m                      (d) 60m
10. The recommended level of lighting for Stitching industry should be  
(a) 1100 lux                      (b) 1200 lux                      (c) 1500 lux                      (d) 1000 lux

**PART B (10 x 2 = 20 Marks)**

1. What is a buffer in Lift terminologies? State its importance.
2. List the different types of vibrators and mention their uses
3. Draw the circuit symbols for the following  
(a) Cell    (b) Lamp    (c) Two way switch    (d) Earth.
4. If a 40 watts fluorescent lamp produces a luminous flux of 80 lumen/watt, calculate the ratio of MHSCP and MSCP.
5. Why Air conditioning in hospital is significant?
6. Define refrigeration and what is the principle of refrigeration?
7. List the significant toxic gases that are produced during fire?
8. What are the various modes of heat transfer?
9. What are the problems observed in Geysers/Boilers?
10. Differentiate Humidification and Dehumidification?

**PART C (5 x 14 = 70 Marks)**

11. a) (i) Write the special features required at Lifts and Escalators for physically challenged and elderly persons  
(ii) What is the difference between A.C and D.C? (7)
- (OR)**
- b) (i) What are the points to be considered in Boiler installation? (7)  
(ii) Draw a neat sketch Domestic Water Supply Service Connection and mark the various components. (7)
12. a) (i) Define Earthing? Explain the different types of Earthing with neat sketches (7)  
(ii) Give an account on Transformer and its applications (7)

**(OR)**

- b) (i) Compare the different types of Wiring Systems. (7)  
(ii) Explain in detail about the Artificial Light Sources. (7)

13. a) (i) The luminous efficiency of each 300 watts filament lamp is 14 lumen/watt. These lamps have to illuminate a drawing hall of 40m X 10m with an uniform intensity of 250lux.if the depreciation factor is 0.9 and utilization factor is 0.4.Find the number of lamps required. (10)  
(ii) Define Glare and list its types. (4)

**(OR)**

- b) (i) State and explain the factors affecting the Visual Tasks. (7)  
(ii) Write a detailed note on Classification of lighting. (7)
14. a) (i) Explain the construction and working of a Refrigerator. (7)  
(ii) Classify the Air Conditioning Systems and explain them with neat sketches. (7)

**(OR)**

- b) (i) List out and explain the various factors to be considered for the selection of correct Air Conditioning System (7)  
(ii) What is Air Conditioning and what is the necessary of it? (7)
15. a) (i) List out the various recommendations of NBC with respect to Fire Safety. (10)  
(ii) Mention the importance and uses of Fire Lifts in High Rise Building (4)

**(OR)**

- b) Write short notes on:  
(i) Fire Alarm Systems (4)  
(ii) Various causes of Fire and its effects in buildings (4)  
(iii) Dump Waiters and Concrete Mixer (6)

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