

March 2021

**BUILDING SERVICES & ENTREPRENEURSHIP DEVELOPMENT**

Time Allowed: 3 Hours

Full Marks: 70

**Answer to Question No.1 is compulsory and Answer any five questions from the rest.**

1. Answer the following questions (any twenty): 20×1

Choose the correct answer from the given alternatives:

- i) The member which is used to guide the movement of the lift car in a vertical direction is: a) Lift Well, b) Guide rails, c) Suspension ropes, d) Lift beams.
- ii) The recommendation capacity of lift for large office building: a) 2000 kg, b) 2020 kg, c) 2040 kg, d) 2050 kg.
- iii) For fire exist requirements, the minimum width of internal staircase is: a) 1000 mm, b) 600 mm, c) 500 mm, d) 700 mm.
- iv) Fire lift should be provided with a minimum capacity of: a) 6 passengers, b) 8 passengers, c) 4 passengers, d) 10 passengers.
- v) In which of the following case, the fire lift are provided: a) the height of the building above 12m, b) the height of the building above 10m, c) the height of the building above 15m, d) the height of the building above 20m.
- vi) Choose the correct formula for calculating the rate of ventilation due to external wind: a)  $Q=KAV$ , b)  $Q= K/AV$ , c)  $Q= AV/K$ , d)  $Q= VK/A$ .
- vii) A building should be oriented at any convenient angle between: a)  $0-30^\circ$ , b)  $10^\circ-30^\circ$ , c)  $15^\circ-30^\circ$ , d)  $5^\circ-30^\circ$ .
- viii) Humidification also known as: a) Addition of artificial light, b) Addition of air to water, c) Addition of sunlight, d) none of the above.
- ix) In NP-3 pipe, NP stands for: a) Non-pressure, b) Nominal pressure, c) New pressure, d) Newel pressure.
- x) Entrepreneur means: a) Object, b) Office, c) Shop, d) Person.
- xi) The pipe which is resistance to corrosion by acidic or alkaline water is: a) Copper pipe, b) Zinc pipe, c) Cast Iron pipe, d) Cement concrete pipe.
- xii) The valve which is used to flow in one direction is: a) Scour valve, b) Air Valve, c) Reflux Valve, d) Gate Valve.
- xiii) The pipe in which only human excreta flows is: a) Soil pipe, b) Waste pipe, c) Vent pipe, d) Rainwater pipe.
- xiv) In which system both soil pipe and vent pipe are separately ventilated by vent pipe: a) Single stack system, b) one pipe sys, c) Two pipe system, d) All the above.

Fill in the blanks:

- xv) A \_\_\_\_ report serves as a business plan indicating the goals of enterprise.
- xvi) \_\_\_\_ is essential for customer satisfaction.
- xvii) A \_\_\_\_ is responsible for layout of water supply, waste and venting system.
- xviii) The term \_\_\_\_ refers to planned integration of economies around the world.
- xix) The \_\_\_\_ investor is a rich person lending money.
- xx) A \_\_\_\_ is a short stub of pipe which connects two other fittings.
- xxi) The full form of PVC is \_\_\_\_.
- xxii) The \_\_\_\_ exit is a special exit in case of fire.
- xxiii) The illumination level for warehouses is \_\_\_\_ lux.
- xxiv) The \_\_\_\_ in pipes allows smooth movement of fluids through it without obstacle.
- xxv) The process of making a new product to sell in a new target market is called \_\_\_\_.

2. Write short notes on (any two): i) Product Costing, ii) Profitability, iii) Working Capital, iv) Financial Ratios. 5+5
3. Enumerate the requirements for exit to permit safe escape of occupants incase of fire or other emergency. 10
4. What is the concept of Entrepreneurship? Define focus group. Discuss the SWOT Analysis. 3+3+4
5. What are the characteristics of Discuss Support System? What are the contents in a project report? 4+6
6. What are the dimensions of Market Assessment? What is the importance of Marketing? 5+5
7. With the following data of activities of a project, cast a suitable network of Programming by CPM.
- | Activity      | A | B | C  | D | E | F   | G |
|---------------|---|---|----|---|---|-----|---|
| Predecessors  | — | A | B  | B | D | C,E | F |
| Time ( days ) | 5 | 6 | 14 | 8 | 5 | 9   | 6 |
- A and G are terminal activities  
Determine – (a) Project Completion time, (b) the Critical path, and (c) the total float for each activity. 10
8. Describe the technical feasibility of a project. What is the cost benefit analysis? 5+5
9. a) What are the essential services required in a building?  
b) Define plumbing and explain what it all includes. 5+5
10. a) Write a note on Spigot and Socket joints (solvent welded).  
b) State the requirements of an ideal water trap. 5+5
11. a) What is natural ventilation? What are its general rules?  
b) Enumerate at least ten points of safety measures against fire. 5+5