

C-5734

Sub. Code

100221

P.G. DIPLOMA EXAMINATION, APRIL 2025

Second Semester

Interior Design

BUILDING SERVICES

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Section A

(10 × 1 = 10)

Answer **all** questions.

1. What is the main purpose of using generators in buildings?
 - (a) Stabilize voltage
 - (b) Convert AC to DC
 - (c) Increase power factor
 - (d) Provide backup power supply
2. Which electrical component is used to measure electrical energy consumption?
 - (a) Energy meter (b) Voltmeter
 - (c) Ammeter (d) Wattmeter

3. Which type of elevator is most suitable for high-rise buildings?
- (a) Hydraulic elevator
 - (b) Traction elevator
 - (c) Dumbwaiter
 - (d) Pneumatic elevator
4. What is the function of a thermostat in an air conditioning system?
- (a) Regulate temperature
 - (b) Filter air
 - (c) Control humidity
 - (d) Distribute air
5. Which type of ventilation system uses a combination of both mechanical and natural ventilation methods?
- (a) Balanced ventilation
 - (b) Controlled ventilation
 - (c) Hybrid ventilation
 - (d) Exhaust ventilation
6. Which of the following is the unit of luminous flux?
- (a) Candela
 - (b) Lumen
 - (c) Lux
 - (d) Watt
7. Which factor significantly contributes to the vertical spread of fire in multi-story buildings?
- (a) Fire-resistant doors
 - (b) Horizontal compartmentation
 - (c) Sprinkler systems
 - (d) Unsealed vertical shafts

8. Which type of sprinkler system is most appropriate for a cold storage warehouse?
- (a) Wet pipe system (b) Pre-action system
(c) Dry pipe system (d) Deluge system
9. What is the primary purpose of sound insulation in buildings?
- (a) To reduce noise pollution
(b) To enhance aesthetic appeal
(c) To increase sound reflection
(d) To amplify sound within rooms
10. What is a major benefit of integrating solar energy into building services?
- (a) Complex maintenance
(b) High installation cost
(c) Limited availability
(d) Renewable energy source

Section B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b)

11. (a) What is an electrical meter? Explain its purpose and the different types of electrical meters used in buildings.

Or

- (b) Describe the different types of emergency lamps and their applications.

12. (a) Describe the key components and working mechanism of an air conditioning system.

Or

- (b) Describe the advantages and limitations of using different types of elevators.

13. (a) Define the daylight factor and explain its significance in building design.

Or

- (b) List the factors to consider in designing ventilation systems and explain their importance.

14. (a) What are the key factors to consider for limiting the spread of fire in a building?

Or

- (b) List and describe the general requirements for making a building fire-resistant.

15. (a) What is biomass energy and mention forms in which biomass can be used.

Or

- (b) Explain the key characteristics of sound and how they influence the acoustics of buildings.

Section C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b)

16. (a) Explain the significance and operation of generators and invertors in providing backup power.

Or

- (b) Prepare an electrical layout for a small residence, including the estimation of load and placement of electrical points.
17. (a) Discuss the importance of proper location and sizing in the installation of lifts in a building. What are the factors to be considered during the planning stage?

Or

- (b) What are the different types of air conditioners and their suitability for various applications.
18. (a) Explain the role of artificial lighting in building interiors. What are the key considerations in the arrangement of luminaires and the distribution of illumination to ensure effective lighting design?

Or

- (b) Compare natural and mechanical ventilation, including their advantages and disadvantages.
19. (a) Discuss the various fire detection and alarm systems used in buildings. How do these systems integrate with the building's overall safety management system?

Or

- (b) Describe the characteristics of fire-resisting materials and their importance in building construction. Provide examples and discuss their applications in different building elements.

20. (a) Discuss the merits of renewable energies. Highlight its advantages over fossil fuels.

Or

- (b) Describe the requirements of good acoustic in a building. What are the principles and factors to be considered in acoustical design?
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P.G. DIPLOMA EXAMINATION, APRIL 2025

Second Semester

Interior Design

PROFESSIONAL PRACTICE AND ESTIMATION

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. What is the primary purpose of a tender?
 - (a) To design layouts
 - (b) To invite bids for project
 - (c) To estimate costs
 - (d) To prepare specifications

2. Which type of contract allows the project's cost to be flexible based on actual expenses?
 - (a) Fixed price contract
 - (b) Time and materials contract
 - (c) Lump sum contract
 - (d) Cost plus contract

3. What is the first step in quantity take-off?
 - (a) Review project plans
 - (b) Measure materials
 - (c) Record measurements
 - (d) Convert measurements
4. Why compare prices from multiple suppliers?
 - (a) To find the best price
 - (b) To meet deadlines
 - (c) To ensure material availability
 - (d) To reduce labor required
5. What is a Bill of Quantities used for?
 - (a) Buying office supplies
 - (b) Designing buildings
 - (c) Estimating project costs
 - (d) Managing employees
6. Which of the following measurement techniques would be used for quantifying concrete required for foundations?
 - (a) Length
 - (b) Area
 - (c) Number
 - (d) Volume

7. Which of the following is not a type of specification?
- (a) Financial Specification
 - (b) Closed Specification
 - (c) Open Specification
 - (d) Prescriptive Specification
8. Which document provides a graphical representation of what is to be built?
- (a) Specifications
 - (b) Bill of quantities
 - (c) Working drawings
 - (d) Schedule of rates
9. What aspect is crucial for restaurant design?
- (a) Flooring materials
 - (b) Lighting and aesthetics
 - (c) Structural engineering
 - (d) Exterior landscaping
10. What is the ideal location for a restaurant's kitchen in the layout?
- (a) At the front near the entrance
 - (b) In the center of the dining area
 - (c) At the back of the restaurant
 - (d) Outside the main building

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) What is a work order in an interior design project?
Describe its role and importance.

Or

- (b) Explain the purpose and typical content of an agreement in a contract.
12. (a) Discuss the process and importance of quantity take-off in estimation.

Or

- (b) Explain the role of pricing in the estimation process and how market rates influence cost calculations.
13. (a) Define a Bill of Quantities and explain its primary purpose in interior projects.

Or

- (b) Discuss the significance of reviewing and verifying a BOQ before it is finalized.
14. (a) Explain the importance of specifications in contract documents for interior design projects.

Or

- (b) Discuss the role of specifications in ensuring the quality of materials and workmanship in a project.

15. (a) Describe the key considerations when planning the layout of a restaurant.

Or

- (b) How can color schemes be used to enhance the aesthetics of a restaurant's interior?

Part C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) What are tender documents, and why are they important? How is a tender scrutinized and accepted?

Or

- (b) Discuss the various types of contracts and their respective advantages and disadvantages.

17. (a) Discuss the principles and methods of preparing detailed specifications for an interior design project.

Or

- (b) Discuss the common problems encountered during the estimation process in interior design projects. How can these issues be effectively resolved? Provide examples and strategies.

18. (a) Discuss the importance of a Bill of Quantities (BOQ) in the tendering process. Include how it influences contractor selection and project cost estimation.

Or

- (b) List and explain the steps to prepare a BOQ, from analyzing project drawings to completing the document.

19. (a) Explain the different types of specifications used in interior design projects. Provide examples for each type.

Or

- (b) Explain in detail the process of specification writing. Provide a comprehensive example to illustrate this process.
20. (a) Describe the impact of different types of lighting on the dining experience in a restaurant. Provide examples.

Or

- (b) Explain the various types of services that must be planned in a restaurant. Why is efficient service planning important for the restaurant's functionality?
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