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***B.Arch. Degree V Semester Regular/Supplementary Examination  
November 2024***

**AR 1502 BUILDING MATERIALS AND CONSTRUCTION - V  
(2021 Scheme)**

Time: 4 Hours

Maximum Marks: 100

Instructions:

- i. *Answer to the point. Illustrations and examples carry due marks.*
- ii. *Part C question to be answered in supplied drawing sheet.*
- iii. *Assume suitable details and dimensions wherever necessary.*
- iv. *Credit will be given for following standard architectural drafting and detailing conventions.*

**PART A  
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes on the following.
- (a) Types of protective and decorative coatings.
  - (b) Plastering.
  - (c) Parallel and criss-cross escalators.
  - (d) Dump waiters.
  - (e) Eccentric footing.
  - (f) Flat plate slabs and flat slabs.
  - (g) Rebound test and penetration test.
  - (h) Grouting and jacketing.

**PART B**

(4 × 10 = 40)

- II. Discuss any four types of artificial finishes used on floor surfaces.  
**OR**
- III. Discuss any four types of finishes used on wall surfaces.
- IV. Explain the planning considerations for elevators. What are the different types of elevators based on operation and function?  
**OR**
- V. Describe the main components of horizontal belt conveyors with necessary illustrations.
- VI. Explain in detail the different types of strip and raft foundations with neat sketches.  
**OR**
- VII. Describe in detail the design principles and considerations involved in constructing R.C.C coffered slabs.

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VIII. Explain the need for chemical admixtures in concrete. Describe in detail on any four types of admixtures and their purposes.

OR

IX. Explain the importance of waterproofing different elements of a building and describe how proper waterproofing can prevent dampness in foundations, roofs, walls and bathrooms.

**PART C**

(1 × 20 = 20)

X. Draw and label to a suitable scale-the plan, section and elevation of an escalator inclined at 30° connecting two floors of a commercial building. Assume a floor-to-floor height of 3 m.

OR

XI. Draw the details of a two-way R.C.C. coffered slab of dimensions 50 m × 50 m. Drawings should include a key plan showing the grid, section and an isometric view showing the cross-section including reinforcement details of the coffered slab. Consider the total slab depth to be 300 mm, waffle slab thickness of 60 mm, ribs of 100 mm thickness and spacing between the ribs as 600 mm. Important details should be shown in 1: 10 Scale.

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***B.Arch. Degree V Semester Regular/Supplementary Examination  
November 2024***

**AR 1503 HISTORY OF ARCHITECTURE V- EARLY MODERN  
(2021 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes on the following:
- (a) Garden City.
  - (b) The Crystal Palace, London.
  - (c) Art and Crafts Movement.
  - (d) Works of Victor Horta.
  - (e) Bom Jesus Cathedral Complex, Goa.
  - (f) Characteristics of Neo-classical architecture.
  - (g) Victoria memorial Calcutta.
  - (h) Briefly explain British Colonial Architecture in India.

**PART B**

(4 × 15 = 60)

- II. How did the introduction of new materials such as steel, concrete and glass during the Industrial revolution influence architecture? Explain with examples.
- OR**
- III. Discuss the industrial revolution and its impact on emergence of new architectural era.
- IV. What are the key characteristics of the Art Nouveau style? Explain with examples.
- OR**
- V. Explain the works of Antonio Gaudi and how his designs influenced architectural development in the post-industrial period.
- VI. Explain the characteristics of Indo-Saracenic architecture, providing examples to illustrate its features.
- OR**
- VII. Explain the influence of Portuguese colonialism on the architecture of Goa, with examples.
- VIII. Explain the layout of Lutyens' Delhi. Discuss the architectural features and characteristic of the British colonial period, using this as an example.
- OR**
- IX. Deliberate on the architectural features of the colonial period in India, using buildings in Mumbai as examples.