

B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2024

(Regulation 2018)

Seventh Semester

CIVIL ENGINEERING

U18CEE0016: Building Information Management

COURSE OUTCOMES

- CO1:** Analyse the selection of various building materials, services and its structure
CO2: Understand the various environmental aspects involved in the building
CO3: Understand the integration of MEP systems in building construction
CO4: Identify the various components of infrastructure projects
CO5: Analyse the various aspects of safety and maintenance in construction

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

- | | | |
|--|-----|-------------------|
| 1. State aesthetics in terms of architecture. | CO1 | [K ₁] |
| 2. Mention the various building enclosure system in a structure. | CO1 | [K ₁] |
| 3. Compare exfiltration with infiltration. | CO2 | [K ₂] |
| 4. List out the various weather resistance materials for water proofing. | CO2 | [K ₁] |
| 5. Mention the objectives of MEP integration. | CO3 | [K ₁] |
| 6. List out the need for integrated building management system. | CO3 | [K ₂] |
| 7. Name the components of harbor. | CO4 | [K ₁] |
| 8. Mention the different types of rails adopted in railway tracks. | CO4 | [K ₁] |
| 9. List out the factors influencing the access for maintenance of buildings. | CO5 | [K ₁] |
| 10. Discuss on the influence of design for the better performance of the building. | CO5 | [K ₂] |

Answer any FIVE Questions: -

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

- | | | | |
|--|---|-----|-------------------|
| 11. a) Identify the factors involved in selection of materials in detail for a highway project, discussing how each factor influences the overall project outcomes | 8 | CO1 | [K ₃] |
| b) Explain the various types of elements of aesthetics in terms of architecture. | 8 | CO1 | [K ₂] |

- | | | | | | |
|-----|----|---|---|-----|-------------------|
| 12. | a) | Illustrate the various techniques in controlling the acoustics in buildings adopted for construction of structural elements | 8 | CO2 | [K ₂] |
| | b) | Analyze the various building related factors to be considered in Indoor Environmental Quality (IEQ) evaluation for a hospital building | 8 | CO2 | [K ₄] |
| 13. | a) | Explain the Eight Criteria involved in sequencing logic of MEP system installation for interface integration in building construction in a high-rise apartment building | 8 | CO3 | [K ₃] |
| | b) | Explain the principles of pipeline positioning in MEP integration. | 8 | CO3 | [K ₂] |
| 14. | a) | Describe the components of highways with suitable diagrams showing the cross-section details. | 8 | CO3 | [K ₂] |
| | b) | Explain the various components of airport and its significance in detail. | 8 | CO4 | [K ₂] |
| 15. | a) | Illustrate the various fire preventive techniques adopted for safety in a shopping mall. | 8 | CO4 | [K ₃] |
| | b) | List out the factors affecting the maintenance of buildings in detail with suitable examples. | 8 | CO4 | [K ₂] |
| 16. | a) | Outline the role of construction management and its technological demands in the infrastructure development projects. | 8 | CO3 | [K ₃] |
| | b) | Categorize the various types of pollution caused due to construction activities. | 8 | CO5 | [K ₂] |
