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Question Paper Code: ACE007



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Regular / Supplementary) - May, 2019

Regulation: IARE – R16

BUILDING MATERIALS CONSTRUCTION AND PLANNING

Time: 3 Hours

(CE)

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

- (a) Why you choose stone as a building material? Define stone quarrying and explain briefly the methods of quarrying of stones. [7M]

(b) What are the advantages & disadvantages of clamp burning? Compare the clamp burning and kiln burning. [7M]
- (a) List out the names of bricks for special use. Write short notes on the process of burning of bricks in Intermittent kilns with neat sketch. [7M]

(b) Explain briefly about aggregates. Discuss briefly about bulk density and porosity of aggregate. [7M]

UNIT – II

- (a) What are the various ingredients required for manufacturing cement? State their functions. [7M]

(b) What are the classifications of cement? Describe the tests conducted on cement to find its properties. [7M]
- (a) List out the various grades of cement in India. What are the advantages and disadvantages of using lime and cement in construction works. [7M]

(b) Explain any two concrete tests in detail. What are the various ingredients of concrete. [7M]

UNIT – III

- (a) What are the classifications of arches according to shape? Explain them in brief. [7M]

(b) Define roof and what are the categories of roof?. What are the requirements of a good roof. [7M]
- (a) What is shallow foundation? Enumerate the types of foundations and explain them briefly. [7M]

(b) What are different types of arches that are used for engineering construction? Describe any three types in detail with sketches. [7M]

UNIT – IV

7. (a) Define stone masonry? Describe the ashlar stone masonry and state its uses in construction of structures? [7M]
- (b) Describe the process of manufacturing of glass? What are the uses of glass in construction industry? [7M]
8. (a) Explain any three-common industrial products of timber in construction industry and defects in timber with suitable diagrams? [7M]
- (b) Name any four wood based products. Explain in detail the causes of decay of wood work and their preservation? [7M]

UNIT – V

9. (a) Write short notes on:
- i. Step
 - ii. Riser
 - iii. Tread
 - iv. Nosing
- [7M]
- (b) What are the requirements for submission of drawing for issue of permission for construction? [7M]
10. (a) What is residential building? Explain briefly classification of building and building bye-laws. [7M]
- (b) Define building planning and state its significance. Explain the principles of planning of building. [7M]

