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[5559]-101

S.E. (Civil) (First Semester) EXAMINATION, 2019
BUILDING TECHNOLOGY AND MATERIALS
(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

Instructions to the candidates:

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Use of electronic pocket calculator is allowed*
- 4) *Assume Suitable data if necessary*
- 5) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 and Q.7 or Q.8*

- Q 1) a) What precautions need to be taken for foundations near existing adjacent old structures? [6]
- b) Write the circumstances under which the following provisions are made [3+3]
- i) Composite masonry
 - ii) Reinforced Brick Masonry

OR

- Q 2) a) What are the specifications of bricks as per IS? [6]
- b) Make a list of checks that should be carried out on formwork : [3X2=6]
- (i) Before concreting
 - (ii) During concreting
 - (iii) After concreting.

P.T.O.

- Q 3) a) State any three flooring materials. State the advantages and limitations of each [3+2+2]
b) Draw a detailed sketch of door and show the following terms : [6]
(i) Horn, (ii) Hold fast, (iii) Meeting style, (iv) Lock rail, (v) Mullion, (vi) Panel

OR

- Q.4) a) Draw a labelled sketch of semi-circular arch and indicate the following: [7]
(i) Springing line, (ii) Key stone, (iii) Voussoir, (iv) Rise, (v) Extrados
(vi) Spandril (vii) Intrados.
b) Draw neat sketch and state the circumstances under which each of the following is adopted : [6]
(i) Dome (ii) Shell roof
- Q.5) a) State the requirements of good stair with respect to: (i) Pitch (ii) Head room (iii) Rise and Tread [2 x 3]
b) Differentiate between the following : [3+3]
(i) Plastering and painting, (ii) Distempers and paints

OR

- Q.6) a) Discuss with sketches any two types of staircases generally used, indicating their suitability for specific use. [3+3]
b) Enlist various types of plasters and mention the requirements of a good plaster. [3+3]
- Q.7) a) What are the outstanding qualities of glass as a building material? Discuss various varieties of glass and their use in building industry. [3+2+2]
b) Explain what do you understand by: [3+3]
i) fire proof construction ii) Safety on construction site

OR

- Q.8) a) State seven important precautions to avoid accidents due to storage or handling of materials on construction site. [7]
- b) Explain what do you understand by: [3+3]
- (i) wall claddings (ii) Eco-friendly materials, and also mention the materials used for both