

320315(20)

APR-MAY

B. E. (Third Semester) Examination, 2020

(Old Scheme)

(Civil Engg. Branch)

BUILDING CONSTRUCTION

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : *All questions are compulsory. Part (a) of each question is compulsory having 2 marks and solve any two parts from remaining part (b), (c) and (d) of each question having 7 marks.*

Unit-I

1. (a) What is water to Cement Ratio (W/C)?

2

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- (b) Write short notes on the following : 7
- (i) Rapid Hardening Portland Cement
 - (ii) Sulphate Resisting Portland Cement
 - (iii) High Alumina Cement
- (c) What is Hydration of Portland Cements? 7
- (d) Discuss briefly the ingredients of portland cement alongwith their functions. 7

Unit-II

2. (a) What are the basic constituents of cement concrete? 2
- (b) Write short notes on : 7
- (i) Permeability reducing admixtures
 - (ii) Air-entraining admixtures
- (c) What is Self-Compacting or Consolidating concrete and what are advantages of using it? 7
- (d) What are the safety measures to be taken while working with wet concrete? 7

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Unit-III

3. (a) What is Short Crete? 2
- (b) What is Ferro cement? State its properties. 7
- (c) Describe Cellular Concrete and state its properties. 7
- (d) Describe briefly the High-Strength Concrete and High Performance Concrete. 7

Unit-IV

4. (a) What is the difference between Softwood and Hardwood? 2
- (b) What is Plywood and where is it used with advantage? State its use in modern building. 7
- (c) Describe the following test for timber : 7
- (i) Compressive strength
 - (ii) Cleavability
 - (iii) Tensile strength

- (d) Differentiate between: 7
- (i) Exogenous and Endogenous Trees
 - (ii) Natural and Artificial Seasoning

Unit-V

5. (a) What are the function of adulterant in a paints? 2
- (b) What are the different types of paints used for protecting steel structures in coastal regions? 7
- (c) Why are steel structures painted? Describe the procedure of painting an old steel structure. 7
- (d) Write short notes on : 7
- (i) Ingredients of paints
 - (ii) Defects in painted work
 - (iii) Enamels
 - (iv) French polish