

320315 (20)

BE (3rd Semester)

Examination, April-May 2021

Branch : Civil

BUILDING MATERIALS

Time Allowed : Three Hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Part (a) of each question is compulsory. Answer any two from (b), (c) & (d). Part (a) is of 2 marks part (b), (c), (d) are of 07 marks..

- Q. 1.** (a) What is the function of C_3S and C_2S during hydration of cement? **2**
- (b) Write short notes on any two related to cement: **7**

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P.T.O.

(2)

(i) Le Chatelier's Test

(ii) Fineness Test

(iii) Field Test

(iv) Hydration of Cement

(c) What are the test on aggregates ? Describe any two in brief. 7

(d) Justify the use of pozzolanic material in cement. 7

Q. 2. (a) What do you mean by grade of concrete ? 2

(b) What are the basic test on concrete ? Write any one field test in detail. 7

(c) Write the varieties of admixtures available in market used for making concrete along with their function and examples. 7

(d) What are the properties of fresh concrete ? Explain in brief. 7

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(3)

- Q. 3. (a) Name some special concrete. 2
- (b) Explain light weight concrete under the following heads : 7
- (i) Material used
 - (ii) Procedure
 - (iii) Purpose
 - (iv) Characteristic
- (c) Write short notes on any two : 7
- (i) Ready mixed concrete
 - (ii) Short crete
 - (iii) Polymer concrete
- (d) What is the difference between high strength and heavy weight concrete ? 7
- Q. 4. (a) What is timber ? Name some sources. 2
- (b) Differentiate between seasoning and prevention of timber. 7

(4)

- (c) What are the common flaws (defects) in timber? Explain with suitable figure. 7
- (d) Write the different low cost construction material. Explain any two of them. 7
- Q. 5.** (a) Mention the types of glass. 2
- (b) Write short notes on any two : 7
- (i) Varnish
 - (ii) Paints
 - (iii) Distemper
- (c) What is the purpose of using composite materials. 7
- (d) Write varieties of ceramics and tiles along with their suitability in construction. 7