

Bachelor of Construction Engineering 2nd year 1st semester ,2019

Ref:EX/CON/T/214, Dt-21-11-18

Sub code:CON/T/214

Time : 3 hours

Part -I

Full Marks-100

Materials of construction

1. CO1: i) Define engineering properties of coarse and fine aggregates that are normally tested at site for acceptance. 8+4+3=15
ii) What are the normal range of specific gravity for good quality of coarse and fine aggregate.
ii) What are the IS CODES for specifications of coarse and fine aggregates
2. CO3: i) Describe the physical & chemical parameters of TMT bars. 8+5+2=15
ii) Explain the meaning of Fe-500D & Fe-600 for TMT bars.
iii) Mention the relevant IS CODES for TMT & structural steel.

OR
- CO3: i) Describe types of cement that are predominantly available in the market & mention their relevant IS CODES. 8+5+3=15
ii) Mention the range of specific gravity for different types of cement.
iii) Describe the name of the test parameters that are carried for acceptance
3. CO5 : i) Define admixture. 5+8+7=20
ii) Enumerate types of admixture depending on its functionality
iii) Describe the advantages of using admixture.

B.E CONSTRUCTION ENGINEERING 2nd Yr FIRST SEMESTER EXAMINATION 2019

MATERIALS OF CONSTRUCTION

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Part -II

Full Marks -50

Answer any two questions

[CO2] Q-1.

- (i) Explain basic principle of production of lime.
- (ii) Classify different types of lime needed for construction.
- (iii) Describe advantage of lime mortar with respect to cement Mortar.
- (iv) Describe the application of Geo-textile and Geo-membrane with its objectives
[5+5+7 +8]

[CO4] Q-2.

- (i) Define and explain softening point and flash point of bitumen.
- (ii) Describe the advantage of using WMA and CMA with respect to HMA.
- (iii) What do you mean by 60/70 grade bitumen?

[10+10+5]

[CO3] Q-3.

- (i) Describe the steps which may be adopted by the field engineers to ascertain quality of good clay bricks
- (ii) Explain with neat sketch different elements in a cross sectional view of a grown up timber structure.
- (iii) Write notes on flyash brick and hollow brick.

[5+12+8]