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B.Tech. 4th Semester (Civil Engg.) F-Scheme

Examination--May--2014

CONSTRUCTION AND CONCRETE TECHNOLOGY

Paper--CE-210-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Q.No. 1 is compulsory. Attempt one question from each section. All questions carry equal marks. Assume missing data, if any suitably.

1. Explain the following :

- (a) Bulking of sand
- (b) Elements of a network
- (c) Hot mix plants
- (d) ACI mix design

5×4=20

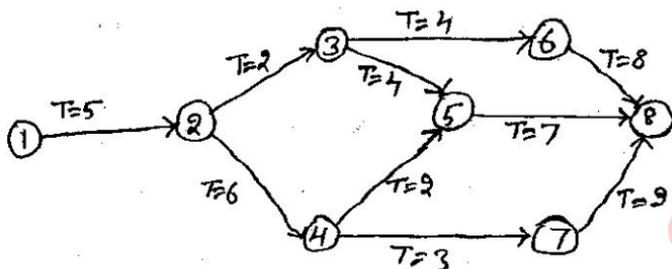
Section-A

2. (a) Explain the bar charts and mile stone charts in detail. 10
- (b) Describe critical path. How it can be determined? Explain briefly. 10

3. A building project consists of 10 activities represented

(2)

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Compute :

- Event time
- Activity time
- Total float

Also determine critical path.

20

Section-B

- Define workability of concrete. What are the factors affecting the workability ? Also explain the use of admixtures in it. 15
 - What do you mean by pre-stressed concrete ? Explain in detail. 05
- Describe the classification of aggregate briefly. 10
 - What are different types of cement ? Briefly

Section-C

6. Describe the principles of concrete mix designs. What are the different factors on which selection of a mix design depends ? Also explain the variation of concrete strength. 20
7. (a) Describe basic consideration and importance of mix design. Explain briefly IS guidelines for mix design. 10
- (b) Explain USBR method in detail. 10

Section-D

8. (a) Enumerate various heavy construction equipments used in the construction of a bridge. Explain in detail. 10
- (b) What do you mean by mass concreting ? Explain the salient features of mass concreting in the construction of dam. 10
9. (a) Write a short note on "Hot mix plant". 05
- (b) What is the necessity of heavy construction equipments ? Explain the working of crushers and dozers in detail. 15