

**24199**

**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**

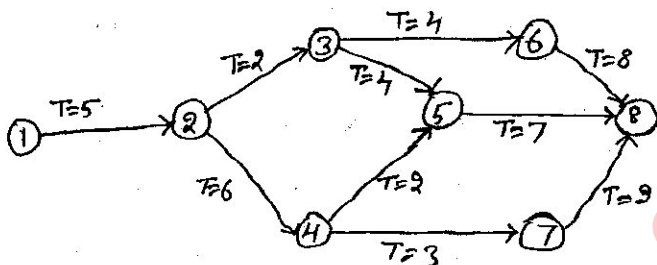
**Section-A**

- 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)

24199



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

(b) 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