

24199

B. Tech Civil 4th Semester F. Scheme

Examination, May-2015

CONSTRUCTION AND CONCRETE TECHNOLOGY

Paper-CE-210-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : (1) Question No. 1 is compulsory. Attempt one question from each section.

(2) All questions carry equal marks.

(3) Assume missing data, if any, suitably.

1. Explain the following :

(a) Mix design procedure

(b) Creep of concrete

(c) Elements of network

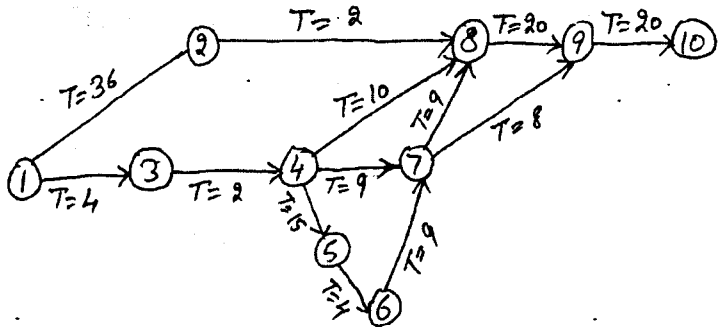
(d) Construction of bridges. 20

Section-A

2. (a) What do you mean by network analysis ? Explain in detail. 5

(b) What is the necessity of project planning and management ? Describe the various techniques of project planning. 15

3. The network for a project is shown in figure, along with the estimated time of completion of each activity.



Compute the.

- (i) activity times,
- (ii) free float,
- (iii) independent float and
- (iv) total float for each activity. Also locate the critical path. 20

Section-B

4. (a) Describe properties of fresh and hardened concrete in detail. 10
- (b) What do you mean by setting of cement ? What are the various tests of cement to check the suitability ? Explain any one in detail. 10

5. (a) Describe testing of concrete mixes. 10
- (b) Describe the following :
- (i) Use of admixtures
- (ii) Different types of aggregate for preparing concrete. 10

Section-C

6. (a) Describe in detail British mix design and ACI mix design method. 10
- (b) Briefly describe the IS guidelines regarding concrete mix design. 10
7. (a) Explain nominal mix concrete. Differentiate between plain concrete and reinforced concrete. 15
- (b) Describe principles of mix design. 5

Section-D

8. What do you mean by mass concreting in dam ? What are the problems related to mass concreting and how these can be rectified ? 20
9. Describe the necessity and working of different heavy construction equipments. What are the factors affecting their selection ? 20