

**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

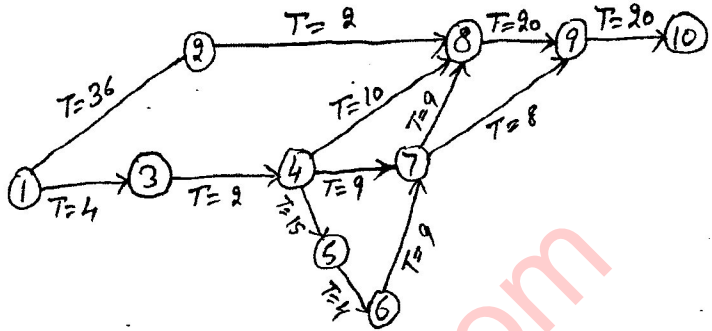
(d) Construction of bridges. 20

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