

**B.Tech. 4th Semester Civil-F-Scheme Examination,
May-2018**

**CONSTRUCTION AND CONCRETE TECHNOLOGY
Paper-CE-210 F**

Time allowed : 3 hours] [Maximum marks : 100

Note : Question No. 1 is compulsory. Attempt five questions. All questions carry equal marks.

1. Write short note on the following : 5×4=20
- Describe the importance of construction planning.
 - Define critical path.
 - What is known as clinker ?
 - Define hot mix plant.
 - What are the main compounds present in OPC ?

Section-A

2. (a) What will be the Average flow time (in days) for the below jobs using Shortest Processing Time rule ? Six jobs arrived in a sequence as given below : 15

Jobs	Processing Time (days)
I	4
II	9
III	5
IV	10
V	6
VI	8

- (b) What are the uses of bar chart? 5
3. (a) For a particular project, eight activities are to be carried out. Their relationship with other activities and expected durations are mentioned in the table below. What will be the critical path for the project? 10

Activity	Predecessors	Duration (days)
a	-	2
b	a	4
c	a	6
d	a	4
e	b	2
f	d	10
g	c, e	6
h	f, g	2

- (b) What are the factors effecting activity duration? 10

Section-B

4. (a) Explain the significance of grading of aggregates with reference to concrete making. 10
- (b) Add a note on the process of hydration of cement. 10

5. (a) Explain the term super plasticizers. How are they useful in concrete production ? 10
- (b) What is the difference between OPC, PCC and PSC ? 10

Section-C

6. Write down the complete procedure of concrete mix design as per BIS. Assume necessary data. 20
7. What is the principal of concrete mix design ? What should be the right approach to design a concrete mix ? 20

Section-D

8. Compare the characteristics and application of different types of hauling equipment with neat sketch. 20
9. (a) Discuss various factors effecting for the selection of construction equipment for dams. 10
- (b) What are the different types of dozers ? 10