Roll No
Total No. of Pages : 02
Total No. of Questions: 05

## B. Arch. (Sem.-10) <br> CONSTRUCTION MANAGEMENT-I

Subject Code : AR-526
Paper ID: [A0959]
Time : 3 Hrs.

## INSTRUCTION TO CANDIDATES :

1. Attempt any THREE questions.
2. All questions carry EQUAL marks.
3. TWO marks are for neatness.
4. Assume any missing data/dimension.
5. Draw necessary sketches neatly.

Q1. Discuss Aims, Objectives and functions of construction management in detail.
Q2. Discuss the stages of a construction project in detail. Explain briefly the construction team.

Q3. For the project data given below, determine the optimum time duration \& optimum cost. Also plot a curve of total cost vs time and show the optimum time duration \& optimum cost.

| Activity | Normal time (days) | Crash time (days) | Normal cost (Rs) | Crash cost (Rs) |
| :---: | :---: | :---: | :---: | :---: |
| $10-20$ | 4 | 3 | 400 | 600 |
| $20-30$ | 5 | 2 | 300 | 750 |
| $20-40$ | 7 | 5 | 360 | 540 |
| $30-40$ | 4 | 2 | 500 | 1000 |
| Assume Indirect cost per day-Rs 250/- |  |  |  |  |

Q4 From the given relation of activities and their duration (in days) do the following :(16)
a) Prepare a network.
b) Calculate project completion time.
c) Identify critical activities and Establish critical path.
d) Calculate all the floats and all the activity timings.

| Activity | duration |
| :---: | :---: |
| $10-20$ | 20 |
| $10-30$ | 24 |
| $20-50$ | 36 |
| $20-70$ | 24 |
| $30-40$ | 12 |
| $30-60$ | 10 |
| $40-50$ | 16 |
| $50-60$ | 16 |
| $50-70$ | 20 |
| 5 | 12 |
| $60-70$ | 14 |
| $70-80$ | 1 |

Q5. a) What are various safety precautions to be taken at a construction site?
b) Discuss in detail about stages of inspection of construction with examples. ( $2 \times 8=16$ )

