APR -17/ TE/Insem.-2

T.E. (Civil)

PROJECT MANAGEMENT AND ENGINEERING ECONOMICS

(2012 Course) (Semester-II) (301008)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.*

2) *Neat diagrams must be drawn wherever necessary.*

3) *Figures to the right side indicate full marks.*

4) *Assume suitable data, if necessary.*

Q1) a) "Good organizational structure" is key of successful organization-justify.**[4]**

b) Explain in detail functions of management. **[6]**

OR

Q2) a) What do you mean by project life cycle phases. **[4]**

b) What is the importance of management in case of construction industry.**[3]**

c) What do you mean by PMBOK. **[3]**

Q3) a) Attempt the following (any four): **[4]**

i) Which networking method is suitable for repetitive type of work?

ii) Which networking method is suitable for planning of complex construction projects?

iii) Which networking method is based on Probabilistic approach?

iv) Define term Activity with the help of suitable example.

v) Define term expected time and write down formula to find out it.

b) What is bar chart? State its advantages. **[3]**

c) What do you understand by CPM & PERT. **[3]**

OR

P.T.O.

Q4) a) The table below gives activities and their duration. **[7]**

Activity	Duration (days)
1-2	7
1-3	5
2-4	11
3-4	4
3-5	5
4-5	7
4-6	2
5-6	9

    i) Draw network. Calculate project duration and highlight critical path.

    ii) Calculate EST, EFT, LST, and LFT for the activities.

b) Write short note on: Types of floats. **[3]**

Q5) a) Explain in detail various cost associated with the construction projects. **[4]**

b) Write short note on (any two): **[6]**

    i) Crashing of network

    ii) Resource leveling

    iii) Line of Balance (LOB)

<div align="center">OR</div>

Q6) a) The following table gives the cost duration data for the activities of small construction project. The indirect cost of the project is Rs. 3000/- per week. **[7]**

Activity	Normal duration (weeks)	Normal cost (Rs)	Crash duration (Weeks)	Crash Cost (Rs)
1-2	7	8,000	3	14,000
1-3	8	4,000	5	8,000
2-3	5	6,000	1	9,000
2-4	6	9,000	3	15,000
3-4	6	5,000	3	11,000

    i) Draw network. Find the project duration and show critical path based no normal duration and corresponding total project cost.

    ii) Determine optimum duration of the project and corresponding minimum cost.

b) Define updating of network diagram and why is it necessary? **[3]**

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