

[5353] - 107

**T.E. (Civil) (Semester - II) End Semester
PROJECT MANAGEMENT AND ENGINEERING
ECONOMICS
(2012 Pattern) (301008)**

Time : 2.5 hours]

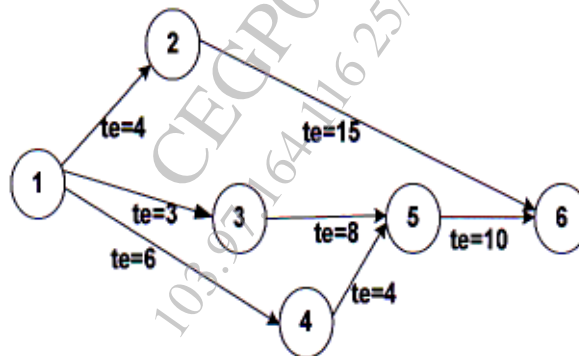
[Max. Marks : 70

*Instructions to the candidates:**Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10*

- Q1)** a) Explain any five principles of scientific management. [5]
 b) Define delegation of Authority. What are its advantages? [5]

OR

- Q2)** a) What are the domain areas of Project management? [5]
 b) Find out expected project duration of the net work diag. given below. What are the chances of completing project in 21 weeks? Mark critical path. [5]



- Q3)** a) Draw the network diag., find Project duration and mark critical path By using following data [6]
 i) Activity A & B are starting activities, requires 9 and 6 days to complete resp.
 ii) Activity C follows activity B, activity C takes 2 days to complete.
 iii) Activity D succeeds activity C and A, activity D take 5 days to complete
 iv) Activity D is terminal activity
 b) What are the methods of planning and scheduling? Explain any one. [4]

P.T.O.

OR

- Q4)** a) List out step by step procedure of network compression. [4]
b) Find out the cost of project before crashing? What will be the change in cost of project by crashing it to minimum time? Consider indirect cost is Rs.100/-day [6]

| Activity | NT (days) | CT (days) | NC (Rs.) | CC (Rs.) |
|----------|--------------|--------------|-------------|-------------|
| 10-20 | 6 | 2 | 1000 | 1200 |
| 10-30 | 8 | 5 | 1500 | 1800 |
| 10-50 | 13 | 10 | 2000 | 2450 |
| 20-30 | 4 | 3 | 500 | 550 |
| 20-40 | 10 | 8 | 1600 | 2000 |
| 30-50 | 7 | 4 | 1200 | 1500 |

- Q5)** a) Explain the following [8]
i) Annuities and their types
ii) Law of diminishing marginal utility
b) Discuss importance of economics in construction industry [4]
c) What do you understand by Law of substitution? [4]

OR

- Q6)** a) Write a short note on: [8]
i) Demand curve and factors affecting on it
ii) Supply curve and factors affecting on it
b) Define Goods, Wants, assets, liability with the help of example. [4]
c) Ms.Madhuri invests Rs. 100000/- in a bank at nominal interest rate 12% for 7 years. The compounding is Monthly. Find future amount she will get after 7 yrs. [4]

- Q7)** a) What are the objectives of material management and functions of purchase dept.? [6]
 b) Define inventory and explain any one technique of controlling inventory. [6]
 c) Define IFR, ISR and injury index with formulas [6]

OR

- Q8)** a) What do you know about the indent? Explain process of material issue and return of site you visited. [6]
 b) What points should you consider while making safety programme of construction site? [4]
 c) "Sakalp groceryshoppee" carries the following items .Segregate the items based on their annual usage and plot ABC curve. [8]

| Sr. No. | Item | Annual Consumption | Cost in Rs. per unit |
|---------|---------------|--------------------|----------------------|
| 1 | Sugar | 150 bags | 4000/- |
| 2 | Wheat | 400 quintal | 2000/- |
| 3 | Moog dal | 3000 kg | 60/- |
| 4 | Tur dal | 4500 kg | 100/- |
| 5 | Oil sunflower | 3000 lit. | 90/- |
| 6 | Chocolates | 3000 pkts. | 50/- |
| 7 | Soap | 10,000 nos. | 10/- |

- Q9)** a) What are the different types of appraisals required to undertake any Project? Explain any one in detail. [6]
 b) Explain break even analysis with help of figure showing breakeven point, break even sales, angle of incidence and margin of safety. [6]
 c) Write a short note on any one [4]
 i) Payback period
 ii) Role of PMC

OR

- Q10)** Write a short note on any four [16]
 a) IRR method
 b) BC ratio method
 c) Detailed project report (DPR)
 d) NPV method
 e) Pre tendering and post tendering

