

Total No. of Questions: 8]

SEAT No. :

PA-1188

[5925]-210

[Total No. of Pages :3

S.E. (Civil Engineering)
PROJECT MANAGEMENT
(2019 Pattern) (Semester-IV) (201012)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) State the primary and secondary objectives of material management. **[3+3]**

b) Explain the process of material procurement in construction project. **[2+4]**

c) The annual demand for the product is 22,000 units. The unit cost is Rs. 8/-. The annual inventory carrying cost per unit per annum is 20% of average inventory cost. If the cost of procurement is Rs. 85/-.

Determine **[2+2+2]**

- i) EOQ
- ii) No. of orders per annum
- iii) Total cost of purchasing

OR

Q2) a) Explain the meaning of **[3+3]**

- i) Raising of Indents
- ii) Delivery of Material

b) How do you inspect quality of material like sand and aggregate on your site? **[3+3]**

c) Explain why safety program have to be implemented at work site. what points should be considered while making a safety program for the following projects. **[2+2+2]**

- i) highway construction
- ii) Building construction

P.T.O.

Q3) a) Explain resource allocation methods and their significance in manpower planning. [2.5+2.5]

b) Following table shows the data of small construction project. [12]

Activity	1-2	2-3	2-4	3-5	4-5	5-6	5-7	6-7
Duration (Days)	4	6	5	2	1	4	6	6

i) Draw the network diagram and update the network by using the following conditions at the end of 8 days.

ii) What is the change in the project duration?

iii) What is remaining duration of project?

At the end of 8 days review was taken which indicates _____

1) Activity 1-2 & 2-4 was completed as originally planned.

2) Activity 2-3 & 3-5 delayed drastically and requires 5 & 6 more days respectively for their completion.

3) Activity 4-5 & 5-6 is in progress and both require 10 more days for their completion.

4) Activity 6-7 yet to start and the original time estimate still appear to be accurate.

5) Activity 5-7 requires 8 days in place of 6 days for its completion.

OR

Q4) a) What do you mean by EVA? Explain any one method in detail [2+2]

b) The following is available information about various activities [13]

Activity	Normal duration (week)	Normal cost (Rs.)	Crash duration (week)	Crash cost (Rs.)
1-2	6	7000	3	14,500
1-3	8	4000	5	8,500
2-3	4	6000	1	9,000
2-4	5	8000	3	15,000
3-4	5	5000	3	11,000

Project overhead cost are Rs 3000/- per week.

Determine network diagram with CPM and optimum cost and duration.

Q5) a) Explain Demand and Supply curve. [3+3]

b) Explain the following terms: [2+2+2]

i) Cost, Price and Value

ii) Equilibrium price, Equilibrium quantity

iii) Factors affecting Price Determination

c) Illustrate with example "Law of Diminishing Marginal Utility" [2+4]

OR

- Q6)** a) Explain Concept of Cost of Capital & Time Value of Money. [3+3]
 b) Mr. Vilas brought an air-conditioner for Rs. 20,000; he paid tax of Rs. 2,000 and Rs. 200 for transport. If he sold it to a customer for Rs. 22,500, what is the percentage profit or loss? [6]
 c) Explain the following laws with suitable diagram. [3+3]
 i) Law of demand and supply
 ii) law of substitution.

- Q7)** a) What are the different types of appraisals required to undertake any Project? Explain any one in detail. [2+4]
 b) Write a short note on: [3+3]
 i) Break even analysis,
 ii) Detailed project report (DPR).
 c) Compare the project by NPV and B/C ratio method and state its feasibility if project cost is Rs. 2,80,000 and it has net cash flow of Rs. 90,000 for a period 4 years. Firm expect returns 10% per annum. [5]

OR

- Q8)** a) Following are the details of Project A and B. Using NPV ($i=8\%$), Comment on the following statements: [6]
 i) Whether both projects are feasible?
 ii) Whether both projects are not feasible?
 iii) Either of the A or B is feasible?

Years	Project A	Project B
Initial Investment	4,00,000	4,50,000
1	1,20,000	1,40,000
2	1,25,000	1,45,000
3	78,000	76,000
4	80,000	65,000
5	75,000	60,000
6	-	90,000

- b) Explain the contents of Project Feasibility report with example. [5]
 c) Explain the role of Project management Consultant in Pre-tender and Post-tender of a Project. [3+3]

