

Total No. of Questions : 10]

SEAT No. :

P2396

[Total No. of Pages : 4

[5253]-107

T.E. (Civil)

**PROJECT MANAGEMENT AND ENGINEERING ECONOMICS
(2012 Pattern) (Semester - II)**

Time : 2½ Hours]

[Max. Marks : 70

Instruction to the candidates:

1) 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) Enlist the objectives and importance of Project management. [6]
b) Define delegation of Authority and comment on Authority and responsibility should go hand in hand. [4]

OR

- Q2)** a) Explain importance of Work break down structures with help of construction related example. [5]
b) Construct network diag. find expected project duration and variance of each activity for the data as follows. [5]

Activity	Duration (Months) (a, m, b)	Activity	Duration (Months) (a, m, b)
1-2	3,4,5	3-5	3,5,8
2-3	1,2,4	4-5	4,6,9
2-4	5,8,10	5-6	5,9,11

P.T.O.

- Q3) a)** A project takes 30 days along the critical path and has standard deviation of six days. What is the probability of completion the project within [6]
- i) 40 days
 - ii) 30 days
 - iii) 35 days

(Take for $Z = 1.6$ value of Pr. = 94.5% and for $Z = 1.7$ value of Pr. = 95.5%)
 (Take for $Z = 0.8$ value of Pr. = 78.8% and for $Z = 0.9$ value of Pr. = 81.6%)

- b) Differentiate between AOA and AON networking methods. [4]

OR

- Q4) a)** What are the methods of manpower planning? Explain in brief. [4]

- b) Following data related to small construction work, Draw time grid diagram and manpower requirement per day. [6]

Activity	Duration (Days)	Men
1-2	3	2
1-3	4	5
1-4	7	3
2-3	0	0
3-5	6	4
4-5	4	3

- Q5) a)** Explain the following laws with suitable diagram. [8]

- i) Law of demand and supply
- ii) Law of diminishing marginal utility

- b) Discuss importance of economics in construction industry. [4]

- c) What do you understand by debt capital and equity capital. [4]

OR

Q6) a) Write a short note on : **[8]**
i) Time value of money.
ii) Types of capital.

b) What are the factors affecting on price determination? **[4]**

c) Explain the factors affecting on demand and supply. **[4]**

Q7) a) What are the objectives of material management and functions of purchase dept.? **[6]**

b) Define EOQ and Derive the expression for it. **[6]**

c) The annual demand for the product is 20,000 units. The unit cost is Rs. 10/-. The annual inventory carrying cost per unit per annum is 20% of avg. inventory cost. If the cost of procurement is Rs. 75/- **[6]**

Determine

i) EOQ

ii) No. of orders per annum

iii) Total cost of purchasing.

OR

Q8) a) Write a note on material procurement process in any organization. **[6]**

b) What points should you consider while making safety programme on site of highway construction? **[4]**

c) "Surya enterprise" 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	Journal pages	1,000 rim	100/-
2	Note book 100 pgs.	4,000 nos.	30/-
3	Note book 200 pgs.	2,000 nos.	40/-
4	Pens	20,000 nos.	3/-
5	Pencil	30,000 nos.	5/-
6	Chocolates	5,000 pkts.	50/-
7	Soap	4,000 nos.	10/-

- Q9)** a) What are the different types of appraisals required to undertake any Project? Explain any one in detail. [6]
- b) Write a note on break even analysis and find out BEQ and break even sales If fixed cost is 60 lakh. Variable cost per unit is Rs. 70/- and selling price per Unit is 150/- [6]
- c) Write a short note on any one : [4]
- i) Payback period.
 - ii) Annuity.

OR

- Q10)**a) What do you understand by NPV and B/C ratio method? Compare the project by both method and state its feasibility if project cost is Rs.2,50,000 has net cash flow of Rs.25,000 for a period 5 years. Firm expects returns at 10 % per annum. [8]
- b) Write a short note on any two : [8]
- i) IRR method.
 - ii) Break even analysis.
 - iii) Detailed project report (DPR).

