

Total No. of Questions : 10]

SEAT No. :

P3470

[5560]-107

[Total No. of Pages : 3

T.E. (Civil)

PROJECT MANAGEMENT AND ENGG. ECONOMICS

(2012 Pattern) (Semester - II)

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, Q.9 or Q.10.*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Use of logarithmic tables, slide rule, mollier charts, electronic pocket calculator and steam tables are allowed.*
- 5) *Assume suitable data, if necessary.*

Q1) a) Write a short note on: **[2.5+2.5]**

- i) Management by objective
- ii) Gantt bar chart and its limitations

b) Draw network diag. for the data as follows. **[5]**

- i) Act.A and B are starting activity
- ii) Act.C and D succeeds Act.A
- iii) Act. B and D precedes Act E
- iv) Act F follows Act. C and D
- v) Act. E and F are terminal Activities

OR

Q2) a) Write a short note on: **[2.5+2.5]**

- i) Work break down structures
- ii) Precedence network analysis

b) Construct network diag. for the data as follows. **[5]**

- i) Event 1 is first and event 5 is last.
- ii) Event 2 follows event 1
- iii) Event 3 and 4 are successor of event 2
- iv) Event 3 restrains occurrence of event 4
- v) Event 5 succedes event 1 and 4

Q3) a) Differentiate between CPM and PERT method with suitable example. **[4+1]**

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

OR

P.T.O.

- Q4)** a) What is crashing of network? Explain step by step procedure. [1+4]
 b) What is updating of network diag.? Explain its necessity. [3+2]
- Q5)** a) How do you inspect quality of material like Cement and mud brick on your site? [2+3]
 b) What safety precautions would you take to avoid accidents on tunneling site? Explain safety programme undertaken. [3+2]
 c) Segregate the items as per their annual usage and plot ABC curve. [8]

S.No.	Item	Annual Usage (Rs.)
1	Cement	7,00,000
2	Sand	4,90,000
3	Bricks	2,20,000
4	Paint	80,000
5	Steel	6,00,000
6	Oil	9,000
7	Aggregate	1,20,000
8	Nails	3,000

OR

- Q6)** a) What is site layout? Draw site layout for Bridge on river construction site. [6]
 b) How to judge nature and extent of accident based on IFR and ISR? [6]
 c) Annual requirement of a cement for a firm 'AADI Constructions' is 4000 bags. The cost of bag of cement is Rs. 300. Ordering cost of Rs 110 per order and annual inventory carrying cost is 20 % of avg. inventory. Find EOQ and No. of orders to be placed. [6]
- Q7)** a) "Construction sector is one of the big sector which influences on economic health of Country", Comment. [6]
 b) How to calculate simple and compound interest? What is the difference between the simple interest and compound interest payable on a principal of Rs 1500 in 2 years at the rate of 10 % p.a. [2+4]
 c) Explain demand and supply curve and factors affecting on it. [2+2]

- Q8)** a) Define cost, price and value with the help of suitable example. [2+2+2]
b) Explain law of diminishing marginal utility and law of substitution with help of suitable example. [3+3]
c) Mrs. Mayuri brought a refrigerator for Rs.20000; she paid tax of Rs 2000 and Rs. 200 for transport. If she sold it to a customer for Rs.22500, What is the percentage profit or loss? [4]
- Q9)** 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) ARR method
ii) IRR method
c) Explain Payback period method with formula and suitable example. [4]
- OR
- Q10)** a) Compare the project by NPV and B/C ratio method and state its feasibility if project cost is Rs. 2, 50,000 and it has net cash flow of Rs.70, 000 for a period 5 years. Firm expect returns at 11 % per annum. [6]
b) Write a short note on. [3+3]
i) Role PMC
ii) Break even analysis
c) Explain Detailed project report (DPR) [4]

