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Your Roll No.....

Sr. No. of Question Paper : **6880**
Unique Paper Code : **61018418**
Name of the Paper : **Quantitative Technique**
-6.2Name of the Course : **B.Voc. (banking Insurance Software Development) (GEC-4.3)**
Semester : **IV**
Duration : **3 Hours**
Maximum Marks : **75**



Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. All questions carry equal marks.

SECTION (A):

All questions are compulsory

- Q1.** Explain the critical path and duration of project? (5)
Q2. What is the basic difference between CPM & PERT for any project? (5)
Q3. Discuss the Payback period time in briefly? (5)
Q4. Define NET present value for any project? (5)
Q5. Explain the profitability index? (5)

P.T.O.

SECTION (B):**Attempt any five questions****Q1.** Given below is the time required for different activity of a project (10)

Activity	Predecessors	Time durations (days)		
		Optimistic	Pessimistic	Most likely
A	None	2	4	3
B	None	8	8	8
C	A	7	11	9
D	B	6	6	6
E	C	9	11	10
F	C	10	18	14
G	C,D	11	11	11
H	F,G	6	14	10
I	E	4	6	5
J	I	3	5	4
K	H	1	1	1

- Draw the PERT network?
- Compute the slack for each activity and determine the critical path.?

Q2. Explain the classifications of projects? What are the basic characteristics of project management? (10)

Q3. The initial cash outlay of a project is Rs 50,000/ and it generates cash inflows of Rs 20,000/, Rs 15000, Rs 25000 and Rs 10,000/ in four years. calculate the profitability index at discount rate of 10 %? (10)

Q4. A company is considering to purchase a machine. Two machine A and B are available, each costing Rs 1,00,000. In comparing the profitability of machine, a discount rate of 10% is to be used. The expected cash flows from the project are as follows (10)

Year	Machine A (Rs)	Machine B (Rs)
1	30,000	10,000
2	40,000	30,000
3	50,000	40,000
4	30,000	60,000
5	20,000	40,000

Which of the machine would be profitable by the concept of profitability index?

Q5. Project has an initial investment of Rs 4 lakhs. Its cash flows for 5 years are Rs 1,20,000, Rs 1,50,000, Rs 1,08,000, Rs 90,000 and Rs 72,000, determine the discount payback period assuming a discount rate of 10% p.a.? (10)

Q6. The table showing details of a project

Activity	Predecessor	Normal		Crash	
		Time(weeks)	Cost (Rs)	Time(weeks)	Cost (Rs)
A	-	10	20	7	30
B	-	8	15	6	20
C	B	5	8	4	14
D	B	6	11	4	15
E	B	8	9	5	15
F	E	5	5	4	8
G	A, D, C	12	3	8	4

Indirect cost is Rs 400 per day. Find the optimal duration and the associated minimum project cost? (10)

Q7. Explain accounting rate of return and environmental feasibility of projects (10)