Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PLAN - SEMESTER–VI EXAMINATION – SUMMER 2019

Subject Code:1065503 Date:16/05/2019

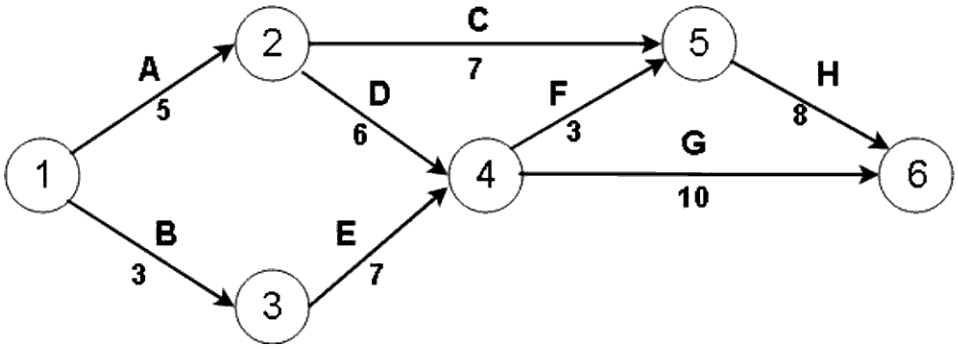
Subject Name: Project Formulation, Appraisal and Management

Time:10:30 AM TO 12:30 PM Total Marks: 50

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q-1 Consider the following project network. (Times shown are in week) **10**



(i) Identify the critical path.

(ii) How long it will take to complete the project?

(iii) Can activity D be delayed without delaying the entire project? If so, How many weeks?

(iv) Can activity C be delayed without delaying the entire project? If so, How many weeks?

(v) What is the schedule for activity E?

Q-2 **(a)** Expand following abbreviation. **05**

1. ARR 2. LS 3. IRR 4. DCF 5. CBR

(b) Explain any 5 Terminology. **05**

1. Critical Path 2. PERT 3. Flot
4. Event 5. Activity 6. Dummy Activity

Q-3 Answer the following question. (Any Two) **10**

(i) Write a sort note on DPR.

(ii) Explain Gantt Bar Chart with example. Also write limitation of that.

(iii)Write a short note on phases of project management.

Q-4 **(a)** For the two project ‘A’ and ‘B’ the detail of cash flow are given below. Consider the discount rate is 12%. Which project is the best according to your point of view and why? **05**

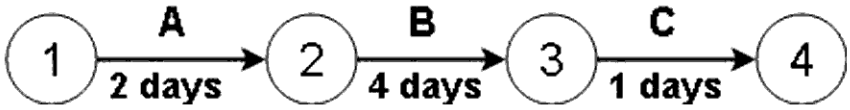
End of year	0	1	2	3	4
Project A (₹)	-60000	10000	20000	30000	40000
Project B (₹)	-60000	40000	20000	20000	20000

(b) List out different method of project evaluation and explain one in detail. **05**

OR

(b) Write a short note on project implementation and monitoring. **05**

Q-5 Draw a Line of Balance (LOB) diagram of following network. Also draw a graph of labours vs duration. (Consider **6 unit** of construction) **10**



- Operation 1: A – 2 days(1 gang of 3 labours)
- Operation 1: A – 4 days(1 gang of 4 labours)
- Operation 1: A – 1 days(1 gang of 2 labours)

OR

Q-5 A project is composed of seven activities, whose time estimates are shown in Table below. From this data **10**

1. Draw the network of the project and draw its critical path.
2. Calculate expected time of each activity.
3. Determine its variance and standard deviation,
4. Find out the probability of completing the project in 22 week.
5. Find out the time duration for 85% probability of its completion.

Activity	**Time estimates in week**		
	t_0	t_p	t_m
1-2	2	8	2
1-3	2	8	5
1-4	3	9	3
2-5	2	2	2
3-5	3	15	6
4-6	3	9	6
5-6	4	16	7

Normal Distribution Function

Normal Deviate −	Probability (%)	Normal Deviate +	Probability (%)
0	50.0	0	50.0
− 0.1	46.0	+ 0.1	54.0
− 0.2	42.1	+ 0.2	57.9
− 0.3	38.2	+ 0.3	61.8
− 0.4	34.5	+ 0.4	65.5
− 0.5	30.8	+ 0.5	69.2
− 0.6	27.4	+ 0.6	72.6
− 0.7	24.2	+ 0.7	75.5
− 0.8	21.2	+ 0.8	78.8
− 0.9	18.4	+ 0.9	81.6
− 1.0	15.9	+ 1.0	84.1
− 1.1	13.6	+ 1.1	86.4
− 1.2	11.5	+ 1.2	88.5
− 1.3	9.7	+ 1.3	90.3
− 1.4	8.1	+ 1.4	91.3
− 1.5	6.7	+ 1.5	93.3
− 1.6	5.5	+ 1.6	94.5
− 1.7	4.5	+ 1.7	95.5
− 1.8	3.6	+ 1.8	96.4
− 1.9	2.9	+ 1.9	97.1
− 2.0	2.3	+ 2.0	97.7
− 2.1	1.8	+ 2.1	98.2
− 2.2	1.4	+ 2.2	98.6
− 2.3	1.1	+ 2.3	98.9
− 2.4	0.8	+ 2.4	99.2
− 2.5	0.6	+ 2.5	99.4
− 2.6	0.5	+ 2.6	99.5
− 2.7	0.3	+ 2.7	99.7
− 2.8	0.3	+ 2.8	99.7
− 2.9	0.2	+ 2.9	99.8
− 3.0	0.1	+ 3.0	99.9

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