Code No. : 16118 (A)

VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
B.E. (CBCS) VI-Semester Main Examinations, January-2021
Project Management
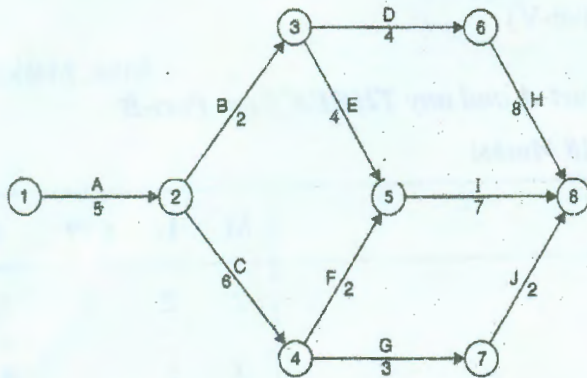(Open Elective-V)

Time: **2** hours

Max. Marks: **60**

Note: Answer any NINE questions from Part-A and any THREE from Part-B
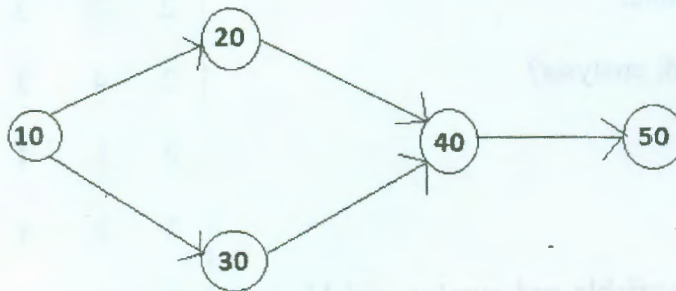
Part-A *(9 × 2 = 18 Marks)*

Q. No.	Stem of the question	M	L	CO	PO
1.	What are the objectives of project management	2	2	1	8, 11
2.	State different types of organizational structure	2	1	1	8, 11
3.	Explain project management techniques	2	2	2	1
4.	Differentiate between PERT and CPM	2	3	2	2
5.	Write about normal time and crash time.	2	2	3	1
6.	What is time cost trade off in network analysis?	2	4	3	2
7.	What is work order?	2	1	4	1
8.	Write about conditions of contracts.	2	2	4	8
9.	State the difference between slack variable and surplus variable in a linear programming problem?	2	1	5	2
10.	Write about simplex method?	2	2	5	1
11.	Define the term critical path?	2	1	1	1
12.	What is slack? What are the different types of slack?	2	2	2	2

Part-B *(3 × 14 = 42 Marks)*

13. a)	What is the significance of project management?	7	2	1	8, 11, 9
b)	Bring out the differences between bar chart and mile stone chart with neat sketch.	7	2	1	2
14. a)	What do you mean by a dummy activity? Why it is used in networking?	3	1	2	1

b)	The network for a project is shown in Fig. and find out the critical path, Earliest Starting Time, Earliest Finish Time, Latest Starting Time, Latest Finish Time, Total Float.	11	5,6	2	2

15. a)	Determine the optimum time duration and optimum cost for a project represented by the network shown in fig. Relevant data is given in table. Indirect cost = Rs. 3,000 per week	10	4	3	11

Activity	Normal		Crash	
	Time (weeks)	Cost (Rs.)	Time (weeks)	Cost (Rs.)
10-20	3	12,000	2	16,000
10-30	6	18,000	3	24,000
20-40	2	20,000	1	23,000
30-40	4	16,000	2	21,000
40-50	5	30,000	4	35,000

b)	What are the various costs involved in Time – Cost analysis? Explain each in detail.	4	3	3	2
16. a)	Explain the different types of contracts with their advantages and disadvantages.	7	1,2	4	6, 8
b)	What is tender and tender notice? What should be included in tender document?	7	2	4	1

			M	L	CO	PO
17.	a)	What are linear programming techniques?	6	2	5	2
	b)	Maximize P = x+2y+3z	8	3,4	5	2

$$7x+z \leq 6$$
$$x+2y \leq 20$$
$$3y+4z \leq 30$$
$$x \geq 0, y \geq 0, z \geq 0 \text{ using simplex method.}$$

			M	L	CO	PO
18.	a)	List out the advantages and disadvantages of functional organization.	7	2	1	9
	b)	Determine the critical path in the network shown. Assume that the project starts at zero time.	7	4	2	2

Activity	Duration	Activity	Duration
A	10	G	7
B	11	H	8
C	9	I	10
D	12	J	6
E	6	K	14
F	6		

			M	L	CO	PO
19.		Answer any *two* of the following:				
	a)	Draw a typical cost-duration curve and show on it optimum duration and minimum project cost.	7	4	3	2
	b)	Write about requirements for a valid contract? What are the objectives of Indian Contract Act?	7	3	4	1, 2
	c)	Maximize Z = 6x+5y	7	4	5	2

$$2x-3y \leq 5$$
$$x+3y \leq 11$$
$$4x+y \leq 15$$
$$x \geq 0, y \geq 0 \text{ using graphical method.}$$

M: Marks;   L: Bloom's Taxonomy Level;   CO: Course Outcome;   PO: Programme Outcome

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	50
2	Knowledge on application and analysis (Level-3 & 4)	42
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable)	08

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