

Bachelor of Management Studies(BMS)Programme

Third YearSemester Vand VI Under Choice Based Credit, Grading and Semester System (REV 18-19)

Course : TYBMS

SEM : VI

Paper :OPERATION RESEARCH

**SAMPLE QUESTION**

Sr. No	Question	OPTION 1	OPTION 2	OPTION 3	OPTION 4	Answer
1	In LPP, the objective function & constraints are expressed as -----	Polynomial Function	Quadratic Function	Linear Function	Variable Function	3
2	The LPP Max $Z=3x+5y$ subject to $2x+3y \leq 6$ , $5x+4y \geq 20$ , $x,y \geq 0$ has -----	Many solution	Unbounded Solution	No solution	Unique Solution	3
3	In maximization LPP ,the simplex method is terminated when all values -----	$c_j - z_j \leq 0$	$c_j - z_j \geq 0$	$c_j - z_j = 0$	$z_j \leq 0$	1
4	Given transportation problem is said to be unbalanced if -----	Number of Origins < Number of Destinations	Number of Origins > Number of Destinations	Total Supply = Total Demand	Total Supply $\neq$ Total Demand	4
5	The cost associated with dummy origin or dummy destination in transportation problem is always -----	Any value	Zero	Any Positive Value	Any Negative value	2
6	In given assignment problem , we add dummy territory if -----	Number of salesmen > Number of Territories	Number of salesmen < Number of Territories	Number of Origins < Number of Destinations	Number of Origins > Number of Destinations	1
7	What is the objective of Project Crashing?	To maximize Resources	To minimize Supply	To minimize Project Cost	To maximize Indirect Cost	3
8	Which method is applied for the small and repetitive project in Network Analysis?	VAM	CPM	PERT	Project Crashing	2
9	What do you called the time between the starting of the first job and completion of the last job?	Processing Time	Elapsed Time	Idle Time	Job sequencing	2
10	Each machine can perform only one type of operation and can undertake only one job at a time. What this statement is leading in job sequencing?	Principal Assumption	Basics of Sequencing	Last step in formulation of Sequencing	Game theory Assumption	1
11	What is the loss of the players in Zero Sum Game?	High	Zero	Low	Moderate	2

12	What do you called the game in which saddle point is available?	Fixed Strategy	Mixed Strategy	Main Strategy	Pure Strategy	4
13	What is the condition to call the game as a Pure Strategy Game?	Unavailability of Saddle Point	High Gain	Availability of Saddle Pont	Zero Gain	3
14	In an Assignment problem ,the purpose of adding dummy row or dummy column is to -----	Resolve degeneracy	Convert unbalanced problem into balanced form	Find Optimal solution	Convert maximization problem into minimization	2
15	The cost associated with dummy job or dummy worker in Assignment problem is always -----	Any value	Zero	Any Positive Value	Any Negative value	2
16	If $a_i$ represent supply from origin $O_i$ & $b_j$ represent demand from destination $D_j$ then given transportation problem is said to be unbalanced if -----	Number of origins < Number of Destinations	Number of origins > Number of Destinations	$\sum a_i \neq \sum b_j$	$\sum a_i = \sum b_j$	3
17	All jobs require the same sequence of operations. What this statement is leading in job sequencing?	Game theory Assumption	Principle Assumption	Basics of Sequencing	Last step in formulation of Sequencing	2
18	If $a_i$ represent supply from origin $O_i$ & $b_j$ represent demand from destination $D_j$ such that $\sum a_i = 200$ , $\sum b_j = 300$ then problem is said to be -----	Balanced Transportation problem	Unbalanced Transportation problem	Balanced Assignment problem	Balanced Assignment problem	2
19	If $a_i$ represent supply from origin $O_i$ & $b_j$ represent demand from destination $D_j$ such that $\sum a_i = 350$ , $\sum b_j = 300$ then we add dummy -----	Supply	Demand	Origin	Destination	4
20	An alternate optimal solution to given transportation problem exists whenever one of the opportunity cost is-----	greater than zero	less than zero	equal to zero	equal to $\infty$	3
21	In Modified Distribution Method of transportation problem ,closed loop begins & ends at -----	Any unoccupied place	Unoccupied place which has positive opportunity cost	Unoccupied place which has negative opportunity cost	Unoccupied place which has most negative opportunity cost	4
22	The processing time of all the jobs on all machines are known and remain constant. What this statement is leading in job sequencing?	Basics of Sequencing	Game theory Assumption	Principle Assumption	Last step in formulation of Sequencing	3
23	If in any problem, profit, revenue, sales etc is given then it is -----	Maximization problem	Balanced problem	Unbalanced problem	Minimization problem	1

24	If any value in XB column of final simplex table is negative then the solution is -----	Non-optimal	Optimal	Feasible	Infeasible	4
25	In simplex table, the variable which is in the basis is known as ----- variable	Slack	Surplus	Artificial	Basic	4
26	On what grounds one can say that the Successful implementation of strategy has taken place?	Good Plan	Market Research	Execution with the time	Outcome of the Strategy	4
27	What is Gain in Game theory?	Negative Payoffs	Positive Payoffs	Limited Payoffs	Unlimited Payoffs	2
28	What is the alternate representation of Crashing?	Increasing Project Duration	Reducing Non-critical Events	Time & Cost Trade-off	Redundancy Network	3
29	What diagram is the combination of logical sequence of jobs and events?	Project Diagram	Network Diagram	Event Diagram	Critical Diagram	2
30	In the optimal simplex table, $c_j - z_j < 0$ indicates -----	No solution	Alternate solution	Unbounded Solution	Unique solution	4
31	In simplex method, to convert $\leq$ constraint into =, we must add -----	Surplus Variable	Slack variable	Both slack & surplus variable	Artificial variable	2
32	What is the minimum number of strategies that a player has to play?	One	Two	Three	Four	1
33	If company earns profit of Rs.120 per unit by selling x product, Rs.80 per unit by selling y product & Rs.100 per unit by selling z product then objective function is --	Max $Z = 120x$	Max $Z = 80y$	Max $Z = 100z$	Max $Z = 120x + 80y + 100z$	4
34	Coefficient of surplus variable in the objective function is-----	1	0	-1	Very large positive number M	2
35	What do you mean by Optimal Strategies?	Simple Strategy	Dominated Strategy	Difficult Strategy	Reverse Strategy	2
36	What an Operations Manager will apply in a game if it contains large number of strategies?	Principles of Retardation	Game theory Assumption	Principles Assumption	Principles of Dominance	4
37	In which type, the cost of materials, machinery, tools, manhours etc. are include?	Significant Cost	Insignificant Cost	Indirect Cost	Direct Cost	4
38	Which is the second longest path in network diagram?	Alternate	Feasible	Sub-Critical	Second Critical	3
39	Which calculation is done to find the earliest occurrence time of an event?	Latest Pass	Approximate Pass	Backword Pass	Forward Pass	4
40	In LPP, Max $Z = 3x + 2y$ subject to $2x + y \leq 50$ , $5x + 2y \leq 110$ , $x \geq 0$ , $y \geq 0$ , which of the points are feasible?	(50, 0)	(30, 20)	(0, 90)	(10, 30)	4

41	What is the probability of a project completing in its expected time period?	0 - 50%	Always more than 75%	Always more than 90%	100%	1
42	Which one of the given option is correct?	$t_p > t_m < t_o$	$t_m < t_o < t_p$	$t_o < t_m = t_p$	$t_o < t_m < t_p$	4
43	What is the symbolic representation of Optimistic Time?	$t_m$	$t_b$	$t_o$	$t_p$	3
44	If in Assignment problem ,number of lines that are drawn to cover all zeroes are equal to numer of rows then the problem has-----	Alternate Solution	Optimal Solution	Degenerate Solution	Non-degenerate Solution	2
45	To convert given LPP into standard form we add slack variable to-----	Only equality constraints	All constraints	Only $\leq$ constraints	Only $\geq$ constraint	3
46	After converting $2x+4y \leq 5$ into equality we get-----	$2x+4y+s_1=5$	$2x+4y-s_1=5$	$2x+4y-s_1+A_1=5$	$2x+4y-s_1-A_1=5$	1
47	How is the dummy activity represented in Network diagram?	With Straight Line	With Double Line	With Zigzag Line	With Dotted line	4
48	What is the purpose of the representaion of Dummy activity?	To Increase the total time	To maintain the equilibrium	Logical relationship of dependancy	To established the interdependency	3
49	Graphical Method is appicable to solve LPP which consists of -----	Only two constraints & only two decision variables	Any number of constraints and only two decision variables	Only two constraints and any number of decision variables	Any number of constraints and any number of decision variables	2
50	In LPP, if constraints are in the form of $\leq$ then we shade the region -----	Below the line	Above the line	Below the line in the first quadrant	Above the line in the first quadrant	3