These are sample MCQs to indicate pattern, may or may not appear in examination

University of Mumbai

Online Examination 2020

Program: BE Automobile Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: AEC605 and Course Name: Operations Research

Time: 1hour Max. Marks: 50

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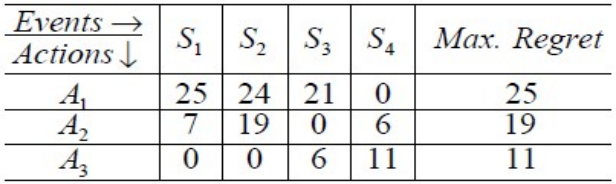
Note to the students:- All the Questions are compulsory and carry equal marks .

		Option A	Option B	Option C	Option D
Q1	For maximization in transportation problem, the objective is to maximize the total _____.	profit	solution	cost	resources
Q2	In case of trasportation problem, the basic feasible solution is said to be non degenerate if total number of allocations are in _____.	occupied cells	empty cells	dependent positions	independent positions
Q3	In a single server queuing model, if arrival rate is λ and service time is μ, the probability of system being idle will be	λ / μ	μ / λ	1/ (μ – λ)	(1- λ) / μ
Q4	Which statement characterizes standard form of a linear programming problem?	Constraints are given by a set of linear equations	Constraints are given only by inequalities of >= type	Constraints are given only by inequalities of <= type	Constraints are given by inequalities of any type

Q5	Demand of taillights 500 per year. Each time an order for taillights is placed, an ordering cost of Rs.5 is incurred. Each light costs Rs. 40, and the holding cost is Rs. 8 /light/year. Assume that demand occurs at a constant rate and shortages are not allowed. How many orders will be placed each year	2	3	1	2.5
Q6	Which of the following probability distribution is most commonly used for number of arrivals in a given time in a single server queuing model	Negative exponential distribution	Poisson distribution	Normal distribution	Beta distribution
Q7	Which of the following is related to Monte Carlo simulation ?	Data collection	Model formulation	Analysis	Random number assignment
Q8	…… branch represents a course of action that can be chosen	Decision	Terminal	Chance	Dummy
Q9	Hungarian Method is used to solve _____.	Transportation problem	Travelling salesman problem	LP prpblem	Simulation problem
Q10	Reneging means_____.	Customers leave when they see that the line is too long	Customers leave after being in the line assuming that it is moving too slowly	Customers move from one line to an another line	Customers permanently leave the line because they have no time
Q11	In this criterion, the decision maker should be neither completely optimistic nor pessismistic, and mixture of both.	Hurwicz	Laplace	Optimism	Regret
Q12	A basic solution is called non-degenerate, if_____.	All the basic variables are zero	At least one of the basic variables is zero	Does not depend on basic Variable	None of the basic variables is zero

Q13	For following problem use Regret Criteria & find Answer  $\frac{Events \rightarrow}{Actions \downarrow}$ | S_1 | S_2 | S_3 | S_4 | Max. Regret A_1 | 25 | 24 | 21 | 0 | 25 A_2 | 7 | 19 | 0 | 6 | 19 A_3 | 0 | 0 | 6 | 11 | 11	11	25	19	None
Q14	Maximization assignment problem is transformed into a minimization problem by _____.	Adding each entry in a column to the maximization value in that column.	Subtracting each entry in a column from the maximum value in that	Subtracting each entry in the matrix from the maximum value in that matrix.	Adding each entry in a column to the minimum value in that matrix.
Q15	A firm that considers the potential reactions of its competitors when it makes a decision	is referred to as a price leader.	is engaged in strategic behavior.	is engaged in collusion.	is referred to as a barometric firm.
Q16	What is called critical activities?	Maximum duration activity	Activites on normal path	Activities on critical path	Activities on shortest path
Q17	The expected value of perfect information (EVPI) is equal to _____.	EPPI - min (EMV)	EPPI + max (EMV)	max (EOL)	None
Q18	In transportation model basic cells indicate positive values and non- basic cells have_____ value.	Positive	Negative	One	Zero
Q19	CPM technique is used to analyse project in which different activities are_____.	Variable	Uncertain	Dummy	Certain
Q20	Activities that are accomplished together are called as _____.	Succeeding activities	Preceding activities	Concurrent activities	Dummy activities
Q21	Dual Simplex Method was introduced by	Dantzig	A.Charnes	Hungarian	Lemke
Q22	What is forward pass calculation in project analysis?	Determining earliest start time and earliest finish	Determining latest start time and latest finish time	Determining latest start time and earliest finish time	Determining earliest start time and latest finish time

Q23	If EOQ = 1200 units, order costs is Rs. 60 per order, and carrying costs is Rs.1 per unit, what is the annual usage in units?	10000	11200	12000	13500
Q24	The point when_____become equal is the economic ordering quantity	Stock-out cost and safety stock cost	Inventory carrying costs and ordering costs	Inventory carrying costs and Stock out cost	Shortage cost and set up costs
Q25	An artificial variable leaves the basis means, there is no chance for the _____variable to enter once again.	slack	artificial	surplus	dual