

Sample questions for Operations Research

| Sr. | Question | Option a | Option b | Option c | Option d |
|-----|--|--|--|---|---|
| 1 | Operations Research is a very powerful tool for | Decision Making | Research | Operations | Programming |
| 2 | This innovative science of Operations Research was discovered during | Civil War | During World War 1 | During World War2 | 1978 |
| 3 | Which of the following is not associated with any L.P.P | feasible solution. | optimum solution. | Basic solution. | quadratic equation |
| 4 | An LPP deals with problems involving only_____. | single objective. | multiple objective. | two objective. | none of these. |
| 5 | Linear programming problem can be solved graphically that consists of at most n variables , then n is | 1 | 2 | 3 | 4 |
| 6 | If the feasible region in a graphical solution of a LPP is empty, we can deduce that the solution is | Infeasible | Alternative | infinite | zero |
| 7 | If there are more than one optimum solution for the decision variable then the solution | Cannot be considered as a solution | unbounded solution | incorrect Solution | is called as Alternative Optima |
| 8 | The objective function coefficients in a primal become the | non zero coefficients in the objective constants in the dual | unrestricted variables in the dual | RHS constants of constraints in the dual | variables in the dual |
| 9 | In a primal has m variables and n constraints then the dual | has $m-n$ constraints | has n variables and m constraints | also has m variables and n constraints | has $m+n$ constraints |
| 10 | In a transportation problem during an iteration while moving from one solution to the next, degeneracy may occur when. | The closed path indicates a diagonal move | Two or more occupied cells are on the closed path but neither of them represents a corner of the path. | Two or more occupied cells on the closed path with minus sign are tied for lowest circled value | Two or more occupied cells on the closed path with minus sign are not tied for lowest circled value |
| 11 | one of the conditions for a basic feasible solution to a $m \times n$ transportation problem to be non-degenerate is :The total number of non-negative allocations is exactly equal to | $m+n$ | $m-n$ | $m+n-1$ | mn |

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| 12 | MODI method is used for | testing if a solution is optimal | to solve an unbalanced problem | for finding the solution if the graphical solution is not available | for finding the initial solution |
| 13 | "Given n facilities, n jobs and the effectiveness of each facility for each job, the problem is to allocate each facility to one and only one job in such a way that the measure of effectiveness is optimised" is an example of | Assignment problem | Game theory | Travelling Salesman Problem | Replacement Theory |
| 14 | In Hungarian method for assignment problem, for converting minimization problem to maximization problem we have to | Subtract the smallest element of a row from that row | Subtract the smallest element of a column from that column | Subtract every element from maximum of all elements | Subtract minimum element from all elements |
| 15 | The objective of sequencing problem is | To reverse the sequence of jobs | To find the constraints on jobs time | To find the sequence in which jobs on hand are to be processed to minimize the total time required for processing the jobs. | To delete the Unwanted jobs |
| 16 | In general sequencing problem will be solved by using | Hungarian Method. | Simplex method. | Johnson and Bellman method | Flood's technique. |
| 17 | Free float is | is computed by subtracting the the total float from slack | is computed by adding the head event slack from the total float. | is computed by subtracting the head event slack from the total float. | It is computed by subtracting the tail event slack from the free float. |
| 18 | PERT stands for | Program Evaluation Review Technique | Program Education Review Technique | Project Education Review Technique | Project Evaluation Review Technique |
| 19 | If an item is replaced immediately after it fails then it is called as | Advance replacement policy | Group replacement policy | Individual replacement policy | Preventive Replacement policy |

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| 20 | Group replacement should be made at the end of period t if the cost of individual replacement for the period t is | less than the average cost per unit time through the end of t+1 periods. | less than the average cost per unit time through the end of t periods. | more than the average cost per unit time through the end of t+1 periods. | more than the average cost per unit time through the end of t periods. |
| 21 | The first Branch and Bound algorithm was developed by | A. Land and G. Doig | Carl Friedrich Gauss | Srinivasa Ramanujan | J.F. McCloskey |
| 22 | Which of the following is an Integer programming algorithm? | Gomory 's Cutting plane algorithm | Hungarian algorithm | Vogels algorithm | Travelling salesman algorithm |
| 23 | A Feasible Region | a) The region is always unbounded | b) The region not containing the solution. | c) The region containing solution. | d) The region that is bounded by all sides |
| 24 | Which one of the following is a part of every game theory model? | a. Players | b. Payoffs | c. Probabilities | d. Strategies |
| 25 | In game theory each player has a number of choices, called | Payoffs | penalty | pure strategies | reward |