Question Paper

1. In operations research, the .... are prepared for situations.
A. mathematical models
B. physical models diagrammatic
C. diagrammatic models
D. None of the above

2. Which of the following is not the phase of OR methodology?
A. Formulating a problem
B. Constructing a model
C. Establishing controls
D. Controlling the environment

3. Operations research is the application of .... methods to arrive at the optimal solutions to the problems.
A. economical
B. scientific
C. Both (A) and (B)
D. artistic

4. Which technique is used in finding a solution for optimizing a given objective, such as profit maximization or cost reduction under certain constraints?
A. Queuing Theory
B. Waiting Line
C. Both (A) and (B)
D. Linear Programming

5. The operations research technique which helps in minimizing total waiting and service costs is ....
A. Queuing Theory
B. Decision Theory
C. Both (A) and (B)
D. None of the above

6. In graphical representation the bounded region is known as .... region.
A. solution
B. basic solution
C. feasible solution
D. optimal

7. Maximize Z = 11x + 8y subject to 4,6,6,0,0.xyx   yxyð£ ð£ ð+ ð£ ð³ ð³
A. 44 at (4, 2)
B. 60 at (4, 2)
C. 62 at (4, 0)
D. 48 at (4, 2)

8. The occurrence of degeneracy while solving a transportation problem means that :
A. total supply equals total demand
B. the solution so obtained is not feasible
C. the few allocations become negative
D. None of the above

9. The initial solution of a transportation problem can be obtained by applying any known method. However, the only condition is that :
A. The solution be optimal
B. The rim conditions are satisfied
C. The solution not be degenerate
D. All of the above

10. The solution to a transportation problem with „m   rows (supplies) and „n columns (destination) is feasible if the number of positive allocations are :
A. m + n
B. m*n
C. m + n – 1
D. m + n + 1

11. The total time required to complete all the jobs in a job sequencing problem is known as ....
A. processing time
B. waiting time
C. elapsed time
D. idle time

12. The minimum number of line covering all zeros in a reduced cost matrix of order n can be ....
A. At least n
B. At most n
C. n – 1
D. n + 1

13. One disadvantage of using North-West Corner Rule to find initial solution to

the transportation problem is that :
A. It is complicated to use
B. It does not take into account cost of transportation
C. It leads to a degenerate initial solution
D. All of the above

14. The unused materials are returned to stores with a material and .... note.
A. Acceptance
B. Transfer
C. Return
D. None of the above

15. The optimum level of inventory is popularly referred to as the ....
A. Minimum stock level
B. Re-order stock level
C. Economic order quantity
D. None of the above

16. Which of the following is not an inventory?
A. Machines
B. Raw Material
C. Finished Products
D. Consumable tools

17. The replacement policy that is imposed on an item irrespective of its failure is ....
A. Group replacement
B. Individual replacement
C. Repair spare replacement
D. Successive replacement

18. Customer behaviour in which the customer moves from one queue to another in a multiple channel situation is :
A. balking
B. reneging
C. jockeying
D. alternating

19. The right-hand side constant of a constraint in a primal problem appears in the corresponding dual as..................
A. coefficient in the objective function

B. a right-hand side constant of a function
C. an input output coefficient
D. a left-hand side constraint coefficient variable

20. If a job is having minimum processing time under both the machines, then the job is placed in :
A. any one (first or last) position
B. available last position
C. available first position
D. Both first and last position