DAA MCQ Questions and Answer PDF

1. Hamiltonian path problem is _____

1. P class problem
2. NP problem
3. N class problem
4. NP complete problem

Answer: NP complete problem

2. Dynamic programming is used to find_____

1. One Solution Is Generated
2. All Optimal Solution Is Generated
3. No Optimal Solution Is Generated
4. Partial Solution Is Generated

Answer: All Optimal Solution Is Generated

3. An algorithm that always runs in polynomial time but possibly returns erroneous answers is called a _____

1. Monte Carlo Algorithm
2. Las Vegas Algorithm
3. Atlantic City Algorithm
4. Approximation algorithm

Answer: Monte Carlo Algorithm

4. What are dendrites?

1. nuclear projections
2. other Name For Nucleus
3. Fibers Of Nerves
4. Twisted Network

Answer: Fibers of Nerves

5. Which Data Structure is used to perform Recursion?

1. queue
2. Array
3. stack
4. linked list

Answer: stack

6. Which of the following statements about loop invariants is false?

1. A loop invariant is the opposite, that is the negation, of the condition of the loop
2. Loop invariants are used to show that algorithms produce the correct results.
3. To prove that a statement is a loop invariant, we use mathematical induction
4. Loop invariants remain true each time a loop is executed

Answer: A loop invariant is the opposite that is the negation, of the condition of the loop.

7. Which is not the important aspect of Loop_____?

1. nested loop
2. Initial condition
3. invariant relation
4. termination

Answer: nested loop

8. What is Adaline in neural networks?

1. Automatic Linear Element
2. Adaptive Line Element
3. Adaptive Linear Element
4. Adaptive Nonlinear Element

Answer: Adaptive Linear Element

9. What is the objective of the knapsack problem?

1. To Get Maximum Weight In The Knapsack
2. To Get Minimum Total Value In The Knapsack
3. To Get Maximum Total Value In The Knapsack
4. To Get Minimum Weight In The Knapsack

Answer: To Get Maximum Total Value In The Knapsack

10. What is the purpose of using randomized quick sort over standard quick sort?

1. To reduce worst case time complexity
2. To improve average case time complexity
3. To reduce worst case space complexity
4. To improve accuracy

Answer: To reduce worst case time complexity

11. Fractional knapsack problem is solved most efficiently by which of the following algorithm?

1. Dynamic Programming
2. Greedy Algorithm
3. Divide And Conquer

4. Backtracking

Answer: Greedy Algorithm

12. Which of the following is not basic control structure_____?

1. the loop
2. the decision
3. the process
4. the sequential

Answer: the process

13. Which data structure has a better amortized running time than others?

1. Stack
2. Queue
3. Priority Queue
4. List

Answer: Priority Queue

14. What is the average case time complexity of merge sort?

1. O(N Log N)
2. O(Log Log N)
3. O(Log N)
4. O(n*n)

Answer: O (N Log N)

15. Which of the following algorithm can be used to solve the Hamiltonian path problem efficiently?

1. iterative improvement
2. branch and bound
3. divide and conquer
4. greedy algorithm

Answer: branch and bound

16. Which data structure is most suitable for implementing best first branch and bound strategy?

1. Queue
2. Stack
3. Priority Queue
4. Linked List

Answer: Priority Queue

17. Which data structure is used for implementing a FIFO branch and bound strategy?

1. Queue
2. Array
3. Stack
4. Linked List

Answer: Queue

18. Time taken in decreasing the node value in a binomial heap is_____

1. O(log n)
2. O(1)
3. O(n)
4. O(n log n)

Answer: O (log n)

19. What is the worst case time complexity of merge sort?

1. O(n*n)
2. O(Log N)
3. O(N Log N)
4. O(Log Log N)

Answer: O (N Log N)

20. Which of the following algorithms has worst time complexity?

1. binary search
2. insertion sort
3. linear search
4. merge sort

Answer: insertion sort

21. Multithreaded computation can be better understood with the help of a_____

1. Computation undirected acyclic graph
2. Computation directed cyclic graph
3. Computation undirected cyclic graph
4. Computation directed acyclic graph

Answer: Computation directed acyclic graph

22. What approach is being followed in Floyd War shall Algorithm?

1. Dynamic Programming
2. Greedy Technique

3. Linear Programming
4. Backtracking

Answer: Dynamic Programming

23. Which of the following is/are property/properties of a dynamic programming problem?

1. Require More Time
2. Greedy Approach
3. Evolutionary Approach
4. Optimal Substructure And Overlapping Sub problems

Answer: Optimal Substructure and Overlapping Sub problems

24. Algorithm can be represented as

1. Flowchart
2. Pseudo code
3. All of above
4. None

Answer: All of above

25. What is tail recursion?

1. A function where the recursive functions leads to an infinite loop
2. A recursive function that has two base cases
3. A recursive function where the function doesn't return anything and just prints the values
4. A function where the recursive call is the last thing executed by the function

Answer: A function where the recursive call is the last thing executed by the function

26. What is the feature of ANNs due to which they can deal with noisy, fuzzy, inconsistent data?

1. Non Distributive Nature Of Networks
2. Distributive Nature Of Networks
3. Non Associative Nature Of Networks
4. Is A Meta Heuristic Search Method

Answer: Distributive Nature of Networks

27. Fractional knapsack problem is also known as

1. Continuous knapsack problem
2. Divisible knapsack problem
3. 0/1 knapsack problem
4. Non continuous knapsack problem

Answer: Continuous knapsack problem

28. Which of the following methods can be used to solve the Knapsack problem?

1. Sorting Algorithm
2. Monte-Carlo Algorithm
3. Divide And Conquer
4. Brute Force, Recursion And Dynamic Programming

Answer: Brute Force, Recursion And Dynamic Programming

29. In greedy method which type of solution is generated_____?

1. Optimal solution
2. Worst solution
3. Best solution
4. All solutions

Answer: Optimal solution

30. What is best case complexity of selection sort

1. n^2
2. nlogn
3. n
4. None

Answer: n^2