

| | |
|----|---|
| 1. | <p>The problems where the solution is in yes or no are called</p> <ul style="list-style-type: none"> A. Halting problems B. Deterministic problems C. Decision problems D. Divide and conquer problems |
| 2. | <p>the set of problems which have nondeterministic polynomial time algorithms are called</p> <ul style="list-style-type: none"> A. P class of problems B. Decision problems C. NP complete D. NP |
| 3. | <p>Which of the following does not fall in problems solved with Brute force Approach</p> <ul style="list-style-type: none"> A. Selection Sort B. Bubble sort C. Linear Search D. Binary Search |
| 4. | <p>For $i = 1$ to $n-1$ do</p> <p>2.1 set $min = i$</p> <p>2.2 For $j = i+1$ to n do</p> <p>2.2.1 If ($a[j] < a[min]$)</p> <p style="padding-left: 40px;">then set $min = j$</p> <p>2.3 If ($i < min$) then swap $a[i]$ and $a[min]$</p> <p>Given code is for</p> <ul style="list-style-type: none"> A. Bubble sort B. Insertion sort C. Quick Sort D. Selection Sort |
| 5. | <p>For $i = 1$ to $n-1$ do</p> <p>2.1 For $j = 1$ to $n-1-i$ do</p> <p>2.2.1 If ($a[j+1] < a[j]$) then swap $a[j]$ and $a[j+1]$</p> <p>Given code is for</p> <ul style="list-style-type: none"> A. Bubble sort B. Insertion sort C. Quick Sort D. Selection Sort |

| | |
|-----|---|
| 6. | <p>For $i = 2$ to n do</p> <p>2.1 Set $v = a[i], j = i - 1$</p> <p>2.2 While $(j \geq 1)$ and $v \leq a[j]$ do</p> <p>2.2.1 $a[j+1] = a[j], j = j - 1$</p> <p>2.3 $a[j+1] = v$</p> <p>Given code is for</p> <p>A. Bubble sort</p> <p>B. Insertion sort</p> <p>C. Quick Sort</p> <p>D. Selection Sort</p> |
| 7. | <p>Each step is chosen such that it is the best alternative among all feasible choices that are available. The choice of a step once made cannot be changed in subsequent steps</p> <p>A. Divide and conquer</p> <p>B. Greedy Programming</p> <p>C. Dynamic Programming</p> <p>D. Branch and bound</p> |
| 8. | <p>Quick sort is solved using</p> <p>A. Divide and conquer</p> <p>B. Greedy Programming</p> <p>C. Dynamic Programming</p> <p>D. Branch and bound</p> |
| 9. | <p>Worst case complexity of quick sort is</p> <p>A. $O(n)$</p> <p>B. $O(\log n)$</p> <p>C. $O(n \log n)$</p> <p>D. $O(n^2)$</p> |
| 10. | <p>Worst case complexity of Merge sort is</p> <p>A. $O(n)$</p> <p>B. $O(\log n)$</p> <p>C. $O(n \log n)$</p> <p>D. $O(n^2)$</p> |
| 11. | <p>Dynamic Programming is a design principle which is used to solve problems with overlapping sub problems</p> <p>A. True</p> |

| | |
|-----|--|
| | B. False |
| 12. | <p>the sub problems in Divide and Conquer are considered to be</p> <p>A. Distinct</p> <p>B. overlapping</p> <p>C. large size</p> <p>D. small size</p> |
| 13. | <p>It is difficult to do the</p> <p>A. Best Case analysis</p> <p>B. Worst case analysis</p> <p>C. Average case analysis</p> |
| 14. | <p>In a fractional Knapsack three items (1,2,3) have weights (4,8,6) & profits (12,32,30) respectively. If the weight of the knapsack is 10 then the solution is</p> <p>A. 3→6 , 2→4</p> <p>B. 3→4 , 2→6</p> <p>C. 3→6 , 1→4</p> <p>D. 1→4 , 2→6</p> |
| 15. | <p>Match the following in the given sequence</p> <p>Stack a. LIFO</p> <p>Queue b. FIFO</p> <p>Array c. continuous memory</p> <p>Link List d. uses pointers</p> <p>A. badc B. abcd C. abdc D. bacd</p> |
| 16. | <p>Find the complexity of the following code</p> <pre>for (i=0; i<n;i++) {for (j=0; i<n;j++) {for (k=0; i<n;k++) {i=j; }}}</pre> <p>A. O(n)</p> <p>B. O(logn)</p> <p>C. O(nlogn)</p> <p>D. O(n³)</p> |