Online Examinations (Even Sem/Part-I/Part-II Examinations 2020 - 2021

Course Name - –Data Structure and Algorithm
Course Code - BCSE201

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Answer all the questions. Each question carry one mark.

9. 1. Algorithm is

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- [ ] Step by step process to solve a problem
- [ ] Pictorial representation to solve a problem
- [ ] Solving a problem anyhow
- [ ] All of these

10. 2. The theta notation represents

Mark only one oval.

- Upper bound
- Lower bound
- Tight bound
- No bound

11. 3. What does it mean when we say that an algorithm X is asymptotically more efficient than Y?

Mark only one oval.

- X will always be a better choice for small inputs
- X will always be a better choice for large inputs
- Y will always be a better choice for small inputs
- X will always be a better choice for all inputs

12. 4. ..... is pictorial representation of an algorithm.

Mark only one oval.

- Program
- Diagram
- Picture
- Flowchart

13. 5. O(1) mean

Mark only one oval.

- Time is constant
- Time is quadratic
- Time is linear
- Time is logarithm

14. 6. O(log n) mean

Mark only one oval.

- Time is constant
- Time is quadratic
- Time is linear
- Time is logarithm

15. 7. Which is not associated with defining complexity?

Mark only one oval.

- Worst case
- Null case
- Best case
- Average case

16. 8. Column major order is a method to arrange elements sequentially .....

Mark only one oval.

- Column wise
- Row wise
- Table wise
- Linear wise

17. 9. In sparse matrix, most elements are

Mark only one oval.

- 0
- empty
- 1
- 2

18. 10. Elements of an array are stored in

Mark only one oval.

- Linear manner
- Random manner
- Contiguous manner
- Top to bottom manner

19. 11. ..... follow FIFO method.

Mark only one oval.

- Stack
- Queue
- Linked List
- Circular Linked List

20. 12. ..... follow LIFO method

Mark only one oval.

- Stack
- Queue
- Linked List
- Circular Linked List

21. 13. Which of the following is not a type of Linked list?

Mark only one oval.

- Singly Linked List
- Doubly Linked List
- Straight Linked List
- Circular Linked List

22. 14. In singly Linked list, the pointer is pointing to the

Mark only one oval.

- Middle element
- Next element
- First element
- Last element

23. 15. How many pointer/s needed to implement double Linked list?

Mark only one oval.

- 1
- 3
- 2
- 4

24. 16. In double Linked list, the last pointer holds

Mark only one oval.

- Address of previous node
- Address of first node
- Address of next node
- Null

25. 17. The value of pointer in singly Linked list if there is only one node

Mark only one oval.

- 3
- 2
- 1
- Null

26. 18. Traversal in Linked list always begins with

Mark only one oval.

- Second node
- Last node
- First node
- Third node

27. 19. ..... is used to hold the first element on stack.

Mark only one oval.

- Top
- Next
- Bottom
- Previous

28. 20. Deletion operation in stack is called

Mark only one oval.

- Pop
- Push
- Insert
- Delete

29. 21. The value of top (tos) when stack is empty

Mark only one oval.

- 0
- -1
- 1
- 2

30. 22. Which of the following is used to calculate postfix expression?

Mark only one oval.

- Stack
- Linked list
- Queue
- Graph

31. 23. The prefix representation of A*B+C

Mark only one oval.

- 1,
- 23 Data Structure and Algorithm (BCSE201(BL)) Even sem exam 2019 - 20 ----->Even sem exam 2019 - 20 (2) MCQ The prefix representation of A*B+C 1 *A+BC
- +A*BC
- +*ABC
- *AB+C

32. 24. Which of the following is used to calculate prefix expression?

Mark only one oval.

- Stack
- Linked list
- Queue
- Tree

33. 25. Insertion in queue is done through ..... end.

Mark only one oval.

- front
- rear
- back
- last

34. 26. Deletion in queue is done through ..... end.

Mark only one oval.

- front
- rear
- back
- last

35. 27. What is the value of rear when queue is empty?

Mark only one oval.

- 0
- 1
- -1
- 2

36. 28. The value of front is incremented by 1 when data element is

Mark only one oval.

- Inserted
- Searched
- Deleted
- None of these

37. 29. Enqueue is a process of

Mark only one oval.

- Insertion
- Searching
- Deletion
- Traversal

38. 30. What is the value of front when queue is empty?

Mark only one oval.

- 0
- 1
- -1
- 2

39. 31. FIFO mean

Mark only one oval.

- First in first out
- First input first out
- Free in free out
- First in first output

40. 32. In circular queue, the value of rear is ..... where MAX is the size of queue.

Mark only one oval.

- Rear = rear +1
- Rear = (rear +1) % MAX
- Rear = rear - 1
- Rear = (rear -1) % MAX

41. 33. If an element is deleted in a queue, the value of ..... is incremented by 1.

Mark only one oval.

- Rear
- Front
- First
- Last

42. 34. Which of the following is a non linear data structure?

Mark only one oval.

- Array
- Linked list
- Stack
- Tree

43. 35. The postfix expression of a+b*c-d

Mark only one oval.

- ab*c + −d
- ab + c * d −
- − + a * bcd
- abc* + d −

44. 36. Node in Linked list is created at .....

Mark only one oval.

- Compile time
- Statically
- Runtime
- Any time

45. 37. The value of postfix expression 3574-2^*+ is

Mark only one oval.

- 48
- 50
- 45
- 41

46. 38. Index of an array starts with

Mark only one oval.

- 0
- 2
- 1
- -

47. 39. The numbers of elements of a 2D array can be obtained using

Mark only one oval.

- Row * Column
- Row - Column
- Row + Column
- Row / Column

48. 40. ..... is not a type of queue.

Mark only one oval.

- Circular queue
- Double ended queue
- Ordinary queue
- Priority queue

49. 41. Which of the following does not related to queue?

Mark only one oval.

- push
- front
- rear
- circular

50. 42. The elements a, b, d, c, e are inserted in queue, the order of deletion is

Mark only one oval.

- abcde
- adbce
- abdce
- abedc

51. 43.Pointer is used in singly Linked list to point to the .....

Mark only one oval.

- Null
- Next node
- Start of the node
- Last node

52. 44. Type of Linked list where the last node points to the first node rather than NULL -

Mark only one oval.

- Singly Linked list
- Circular Linked list
- Doubly Linked list
- All of these

53. 45. Input restricted queue is a type of which queue?

Mark only one oval.

- Priority queue
- Double ended queue
- Circular queue
- Simple queue

54. 46. Priority queue works on the principle of

Mark only one oval.

- LIFO
- PRIORITY
- FIFO
- None of these

55. 47. Deletion of an element is performed first in priority queue having

Mark only one oval.

- ◯ High priority
- ◯ Same priority
- ◯ Low priority
- ◯ No priority

56. 48. Deletion of two elements in priority queue with same priority follows

Mark only one oval.

- ◯ FIFO
- ◯ Randomly
- ◯ LIFO
- ◯ None of these

57. 49. Deletion operation, if the capacity of stack is empty gives

Mark only one oval.

- ◯ Stack overflow
- ◯ Stack no flow
- ◯ Stack underflow
- ◯ of these

58. 50. Students standing in a line, roll number wise is an example of

Mark only one oval.

- Stack
- Graph
- Queue
- Tree

59. 51. Which of the following is/are true about Linked list when compared with array?

Mark only one oval.

- buThe size of array has to be pre-decided, linked lists can change their size any time
- Random access is not allowed in implementation of Linked Lists
- It is easy to insert and delete elements in Linked List
- All of thesebble

60. 52. How many elements are present in the stack if the variable Top pointing towards the topmost element -

Mark only one oval.

- 0
- Top +1
- Top -1
- 1

61. 53. Structure defined to create a node in Linked list is

Mark only one oval.

- homogenous
- heterogeneous
- Both (a) &(b)
- None of these

62. 54. ..... data structure is useful in implementation of quick sort.

Mark only one oval.

- BST
- Stack
- List
- Queue

63. 55. The number of iterations in selection sort (ascending order) of an array = {3,4,5,2,1} are

Mark only one oval.

- 3
- 2
- 4
- 5

64. 56. Quick sort follows

Mark only one oval.

- Divide & conquer
- Brute force technique
- Greedy algorithm
- Dynamic programming

65. 57. Merge sort works on the principle of

Mark only one oval.

- Divide & conquer
- Brute force technique
- Greedy algorithm
- Dynamic programming

66. 58. In first iteration, the merge sort algorithm divides the array into ..... sub arrays.

Mark only one oval.

- 5
- 2
- 3
- 4

67. 59. The sorting (ascending order) in which the last element is sorted in first pass is

Mark only one oval.

- Bubble sort
- Insertion sort
- Heap sort
- Quick sort

68. 60. The sorting (ascending order) in which the minimum value element is selected and placed at the beginning is

Mark only one oval.

- Bubble sort
- Insertion sort
- Selection sort
- Quick sort

69. 61. The sorting where an element is selected as a pivot and the array is partitioned based on it is

Mark only one oval.

- Bubble sort
- Insertion sort
- Selection sort
- Quick sort

70. 62. Searching process will be easy if elements are

Mark only one oval.

- Sorted
- Same for all
- Not sorted
- Not determined

71. 63. Searching in a linear manner is called

Mark only one oval.

- Linear searching
- Binary searching
- Line searching
- Non linear searching

72. 64. The fastest way to store and search data is

Mark only one oval.

- bubbSorting
- Hashing
- Both (a) & (b)
- Indexingle

73. 65. Function used in hashing data structure is called

Mark only one oval.

- Linear function
- Hash function
- Non linear function
- None of these

74. 66. The use of hashing is to search that takes

Mark only one oval.

- O(1) time
- O(n) time
- O(log n) time
- O(n log n) time

75. 67. Which of the following is not a collision resolution strategy for open addressing?

Mark only one oval.

- Quadratic probing
- Linear probing
- Rehashing
- All of these

76. 68. The process where elements are competing for the same bucket is

Mark only one oval.

- Collision
- Diffusion
- Duplication
- Replication

77. 69. Which of the following is used in making hash tables?

Mark only one oval.

- Linked list
- Queue
- Stack
- None of these

78. 70. Key-value pairs is visible in

Mark only one oval.

- Heaps
- Hash table
- Both (a) & (b)
- Skip list