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SR.NO	Project NAME	Technology
1	Online E-Learning Platform Hub	React+Springboot+MySql
2	PG Mates / RoomSharing / Flat Mates	React+Springboot+MySql
3	Tour and Travel management System	React+Springboot+MySql
4	Election commition of India (online Voting System)	React+Springboot+MySql
5	HomeRental Booking System	React+Springboot+MySql
6	Event Management System	React+Springboot+MySql
7	Hotel Management System	React+Springboot+MySql
8	Agriculture web Project	React+Springboot+MySql
9	AirLine Reservation System / Flight booking System	React+Springboot+MySql
10	E-commerce web Project	React+Springboot+MySql
11	Hospital Management System	React+Springboot+MySql
12	E-RTO Driving licence portal	React+Springboot+MySql
13	Transpotation Services portal	React+Springboot+MySql
14	Courier Services Portal / Courier Management System	React+Springboot+MySql
15	Online Food Delivery Portal	React+Springboot+MySql
16	Muncipal Corporation Management	React+Springboot+MySql
17	Gym Management System	React+Springboot+MySql
18	Bike/Car ental System Portal	React+Springboot+MySql
19	CharityDonation web project	React+Springboot+MySql
20	Movie Booking System	React+Springboot+MySql

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21	Job Portal web project	React+Springboot+MySql
22	LIC Insurance Portal	React+Springboot+MySql
23	Employee Management System	React+Springboot+MySql
24	Payroll Management System	React+Springboot+MySql
25	RealEstate Property Project	React+Springboot+MySql
26	Marriage Hall Booking Project	React+Springboot+MySql
27	Online Student Management portal	React+Springboot+MySql
28	Resturant management System	React+Springboot+MySql
29	Solar Management Project	React+Springboot+MySql
30	OneStepService LinkLabourContractor	React+Springboot+MySql
31	Vehical Service Center Portal	React+Springboot+MySql
32	E-wallet Banking Project	React+Springboot+MySql
33	Blogg Application Project	React+Springboot+MySql
34	Car Parking booking Project	React+Springboot+MySql
35	OLA Cab Booking Portal	React+NextJs+Springboot+MySql
36	Society management Portal	React+Springboot+MySql
37	E-College Portal	React+Springboot+MySql
38	FoodWaste Management Donate System	React+Springboot+MySql
39	Sports Ground Booking	React+Springboot+MySql
40	BloodBank mangement System	React+Springboot+MySql

41	Bus Tickit Booking Project	React+Springboot+MySql
42	Fruite Delivery Project	React+Springboot+MySql
43	Woodworks Bed Shop	React+Springboot+MySql
44	Online Dairy Product sell Project	React+Springboot+MySql
45	Online E-Pharma medicine sell Project	React+Springboot+MySql
46	FarmerMarketplace Web Project	React+Springboot+MySql
47	Online Cloth Store Project	React+Springboot+MySql
48	Train Ticket Booking Project	React+Springboot+MySql
49	Quizz Application Project	JSP+Springboot+MySql
50	Hotel Room Booking Project	React+Springboot+MySql
51	Online Crime Reporting Portal Project	React+Springboot+MySql
52	Online Child Adoption Portal Project	React+Springboot+MySql
53	online Pizza Delivery System Project	React+Springboot+MySql
54	Online Social Complaint Portal Project	React+Springboot+MySql
55	Electric Vehical management system Project	React+Springboot+MySql
56	Online mess / Tiffin management System Project	React+Springboot+MySql
57		React+Springboot+MySql
58		React+Springboot+MySql
59		React+Springboot+MySql
60		React+Springboot+MySql

Spring Boot + React JS + MySQL Project List

Sr.No	Project Name	YouTube Link
1	Online E-Learning Hub Platform Project	https://youtu.be/KMjyBaWmgzg?si=YckHuNzs7eC84-IW
2	PG Mate / Room sharing/Flat sharing	https://youtu.be/4P9clHg3wvk?si=4uEsi0962CG6Xodp
3	Tour and Travel System Project Version 1.0	https://youtu.be/-UHOBywHaP8?si=KHHfE_A0uv725f12
4	Marriage Hall Booking	https://youtu.be/VXz0kZQi5to?si=ILOS-QG3TpAFP5k7
5	Ecommerce Shopping project	https://youtu.be/vJ_C6LkhrZ0?si=YhcBylSErvdn7paq
6	Bike Rental System Project	https://youtu.be/FlzsAmIBCbk?si=7ujQTJqEgkQ8ju2H
7	Multi-Restaurant management system	https://youtu.be/pvV-pM2Jf3s?si=PgvnT-yFc8ktrDxB
8	Hospital management system Project	https://youtu.be/lynlouBZvY4?si=CXzQs3BsRkjKhZCw
9	Municipal Corporation system Project	https://youtu.be/cVMx9NVyl4I?si=qX0oQt-GT-LR_5jF
10	Tour and Travel System Project version 2.0	https://youtu.be/_4u0mB9mHXE?si=gDiAhKBowi2gNUKZ

Sr.No	Project Name	YouTube Link
11	Tour and Travel System Project version 3.0	https://youtu.be/Dm7nOdpasWg?si=P_Lh2gcOFhlyudug
12	Gym Management system Project	https://youtu.be/J8_7Zrkg7ag?si=LcxV51ynfUB7OptX
13	Online Driving License system Project	https://youtu.be/3yRzsMs8TLE?si=JRI_z4FDx4Gmt7fn
14	Online Flight Booking system Project	https://youtu.be/m755rOwdk8U?si=HURvAY2VnizlyJlh
15	Employee management system project	https://youtu.be/ID1iE3W_GRw?si=Y_jv1xV_BljhrD0H
16	Online student school or college portal	https://youtu.be/4A25aEKfei0?si=RoVgZtxMk9TPdQvD
17	Online movie booking system project	https://youtu.be/Lfjv_U74SC4?si=fiDvrhhrjb4KSIsm
18	Online Pizza Delivery system project	https://youtu.be/Tp3izreZ458?si=8eWAOzA8SVdNwlyM
19	Online Crime Reporting system Project	https://youtu.be/0UlzReSk9tQ?si=6vN0e70TVY1GOwPO
20	Online Children Adoption Project	https://youtu.be/3T5HC2HKyT4?si=bntP78niYH802I7N

1. It exports a set of operations

- A. true, false
- B. false, true
- C. true, true
- D. false, false

Answer» C. true, true

[discuss](#)

2. A graph is said to be complete if there is no edge between every pair of vertices.

- A. true, false, true
- B. true, true, false
- C. true, true, true
- D. false, true, true

Answer» B. true, true, false

[discuss](#)

3. Space Complexity iii) Is the strategy guaranteed to find the solution when there is one.

- A. a-iii, b-ii, c-i
- B. a-i, b-ii, c-iii
- C. a-iii, b-i, c-ii
- D. a-i, b-iii, c-ii

Answer» C. a-iii, b-i, c-ii

[discuss](#)

4. The time complexity of binary search is $O(\log n)$.

- A. true, false
- B. false, true
- C. false, false
- D. true, true

Answer» D. true, true

[discuss](#)

5. A graph is said to be complete if there is an edge between every pair of vertices.

- A. true, true
- B. false, true

Answer» A. true, true

5. A graph is said to be complete if there is an edge between every pair of vertices.

C. false, false

D. true, false

Answer» A. true, true

[discuss](#)

6. To find the predecessor, it is required to traverse the list from the first node in case of singly linked list.

A. i-only

B. ii-only

C. both i and ii

D. none of both

Answer» C. both i and ii

[discuss](#)

7. Nodes that are not root and not leaf are called as internal nodes.

A. true, true

B. true, false

C. false, true

D. false, false

Answer» C. false, true

[discuss](#)

8. A node is child node if out degree is one.

A. true, true

B. true, false

C. false, true

D. false, false

Answer» B. true, false

[discuss](#)

9. Insertion b) Deletion c) Retrieval d) Traversal

A. only a,b and c

B. only a and b

C. all of the above

D. none of the above

Answer» D. none of the above

[discuss](#)

10. In strictly binary tree, the out-degree of every node is either 0 or 2.

- A. true, false
- B. false, true
- C. true, true
- D. false, false

Answer» C. true, true

[discuss](#)

11. The complexity of the average case of an algorithm is

- A. much more complicated to analyze than that of worst case
- B. much more simpler to analyze than that of worst case
- C. sometimes more complicated and some other times simpler than that of worst case
- D. none or above

Answer» A. much more complicated to analyze than that of worst case

[discuss](#)

12. The Average case occur in linear search algorithm

- A. when item is somewhere in the middle of the array
- B. when item is not in the array at all
- C. when item is the last element in the array
- D. when item is the last element in the array or is not there at all

Answer» A. when item is somewhere in the middle of the array

[discuss](#)

13. Which of the following case does not exist in complexity theory

- A. best case
- B. worst case
- C. average case
- D. null case

Answer» D. null case

[discuss](#)

14. The space factor when determining the efficiency of algorithm is measured by

- A. counting the maximum memory needed by the algorithm
- B. counting the minimum memory needed by the algorithm
- C. counting the average memory needed by the algorithm

Answer» A. counting the maximum memory needed by the algorithm

14. The space factor when determining the efficiency of algorithm is measured by

D. counting the maximum disk space needed by the algorithm

Answer» A. counting the maximum memory needed by the algorithm

[discuss](#)

15. The time factor when determining the efficiency of algorithm is measured by

- A. counting microseconds
- B. counting the number of key operations
- C. counting the number of statements
- D. counting the kilobytes of algorithm

Answer» B. counting the number of key operations

[discuss](#)

16. Two main measures for the efficiency of an algorithm are

- A. processor and memory
- B. complexity and capacity
- C. time and space
- D. data and space

Answer» C. time and space

[discuss](#)

17. Computers are used for processing numerical data called _____ data.

- A. float
- B. local
- C. character
- D. non-local

Answer» C. character

[discuss](#)

18. Each programming language contains a _____ set that is used to communicate with the computer.

- A. character
- B. integer
- C. float
- D. numeric

Answer» A. character

[discuss](#)

19. Finite sequence S of zero or more characters is called _____.

- A. array
- B. list
- C. string
- D. block

Answer» C. string

[discuss](#)

20. String with zero characters is called _____ string.

- A. null
- B. binary
- C. totalled
- D. list

Answer» A. null

[discuss](#)

21. A computer which can access an individual byte is called a _____ machine.

- A. memory addressable
- B. byte addressable
- C. bit
- D. byte

Answer» B. byte addressable

[discuss](#)

22. Groups of consecutive elements in a string, such as words, phrases and sentences are called _____.

- A. main strings
- B. substring

Answer» B. substring

22. Groups of consecutive elements in a string, such as words, phrases and sentences are called _____.

C. index

D. block

Answer» B. substring

[discuss](#)

23. The number of characters in a string is called its _____.

A. length

B. breath

C. width

D. none

Answer» A. length

[discuss](#) ⁽¹⁾

24. _____ operation of word processing involves replacing one string in the text by another.

A. insertion

B. deletion

C. searching

D. replacement

Answer» D. replacement

[discuss](#)

25. _____ is the problem of deciding whether or not a given String pattern P appears in a text T.

A. pattern matching

B. searching

C. sorting

D. deletion

Answer» A. pattern matching

[discuss](#)

26. _____ is a linearly ordered sequence of memory cells.

A. node

B. link

C. variable

D. null

Answer» A. node

[discuss](#)

27. Each node in a linear list contains an item called _____ which points to the next node in the list.

- A. node
- B. link
- C. variable
- D. null

Answer» B. link

[discuss](#)

28. _____ is a variable whose length may vary during the execution, but the length cannot exceed a maximum values defined before the program is executed.

- A. dynamic
- B. static
- C. semi static
- D. global

Answer» C. semi static

[discuss](#)

29. In _____ storage, each cell is divided into two parts---- the path stores a single character, while the second part contains the address of the cell containing the next character.

- A. fixed length
- B. linked list
- C. variable length
- D. sequential

Answer» B. linked list

[discuss](#)

30. If string 1 = John, and string 2 = Rivers are merged, the process is called ----

- A. insertion
- B. deletion
- C. concatenation
- D. replacement

Answer» C. concatenation

[discuss](#)

31. ____ is a variable whose length may vary during the execution of a program.

- A. dynamic
- B. static
- C. semi static
- D. global

Answer» A. dynamic

[discuss](#)

32. _____ is a structure used to represent the linear relationship between elements by means of sequential memory locations.

- A. linked list
- B. array
- C. pointer
- D. stack

Answer» B. array

[discuss](#)

33. A ____ is a list of a finite number of homogeneous data elements.

- A. linear array
- B. pointer
- C. linked list
- D. tree

Answer» A. linear array

[discuss](#)

34. The number of elements n is called the length or ____ of the array.

- A. upper bound
- B. lower bound

Answer» C. size

34. The number of elements n is called the length or ____ of the array.

- C. size
- D. variable

Answer» C. size

[discuss](#)

35. The number K in $A[K]$ is called the subscript or the ____.

- A. size
- B. index
- C. variable
- D. constant

Answer» B. index

[discuss](#)

36. Which of the following items are not part of the array declaration?

- A. name of the array
- B. data type of the array
- C. index set of the array
- D. length of the array

Answer» D. length of the array

[discuss](#)

37. Programming languages like FORTRAN and PASCAL allocate memory space for arrays ____.

- A. dynamically
- B. statically
- C. successively
- D. alternatively

Answer» B. statically

38. The process of accessing and processing each element of an array A, exactly once is called _____.

- A. deleting
- B. inserting
- C. traversing
- D. searching

Answer» C. traversing

[discuss](#)

39. _____ refers to the operations of rearranging the elements of an array A so that they are in increasing order.

- A. searching
- B. sorting
- C. traversing
- D. inserting

Answer» B. sorting

[discuss](#)

40. Two dimensional arrays are sometimes called _____ arrays.

- A. integer
- B. boolean
- C. matrix
- D. real

Answer» C. matrix

[discuss](#)

41. _____ is a list in which the order of the items is significant, and the items are not necessarily sorted.

- A. ordered list
- B. indexed list
- C. sequential list
- D. unordered list

Answer» C. sequential list

[discuss](#)

42. Representation of a two dimensional as one single column of rows and mapping it sequentially is called _____ representation.

- A. row-major
- B. row
- C. column-major
- D. column

Answer» A. row-major

[discuss](#)

43. Matrices with relatively high proportion of zero entries are called _____ matrices.

- A. triangular
- B. diagonal
- C. sparse
- D. adjacency

Answer» C. sparse

[discuss](#)

44. _____ arrays are where the elements in the different arrays with the same subscript belongs to the same record.

- A. one dimensional
- B. parallel
- C. two dimensional
- D. static

Answer» B. parallel

[discuss](#)

45. Records can be stored in an area of memory called _____ memory.

- A. dynamic

Answer» A. dynamic

45. Records can be stored in an area of memory called _____ memory.

- B. static
- C. simple
- D. parallel

Answer» A. dynamic

[discuss](#)

46. A matrix in which non-zero entries can only occur on the diagonal or on elements immediately above or below the diagonal, is called _____ matrix.

- A. triangular
- B. tridiagonal
- C. sparse
- D. simple

Answer» C. sparse

[discuss](#)

47. Elements of an array are accessed by

- A. accessing function in built in data structure
- B. mathematical function
- C. index
- D. none of the above

Answer» C. index

[discuss](#)

48. Array is a

- A. index data structure
- B. non linear data structure
- C. complex data structure
- D. none of the above

Answer» D. none of the above

[discuss](#)

49. Row-major order in two-dimensional array refers to an arrangement where

- A. all elements of a row are stored in memory in sequence followed by next row in sequence, and so on
- B. all elements of row are stored in memory in sequence followed by next column in sequence, and so on
- C. all elements of row are stored in memory in sequence followed by next column in sequence

Answer» A. all elements of a row are stored in memory in sequence followed by next row in sequence, and so on

49. Row -major order in two -dimensional array refers to an arrangement where

D. none of the above

Answer» A. all elements of a row are stored in memory in sequence followed by next row in sequence, and so on

[discuss](#)

50. Array is

A. data in physical order

B. data in logical order

C. both a& b

D. none of the above

Answer» A. data in physical order

[discuss](#)

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51. how many vlue can held by an array A(-1...m,1...m)?

- A. m
- B. m^2
- C. $m(m+1)$
- D. $m(m+2)$

Answer» D. $m(m+2)$

[discuss](#)

52. let x be the adjacency matrix of a graph .G with no self loop.The entries along the principle diagonal of x are

- A. all "0"
- B. all "1"
- C. both 0&1
- D. different

Answer» A. all "0"

[discuss](#)

53. _____ refers to the operation of finding the location of a given item in a collection of items.

- A. sorting
- B. searching
- C. function
- D. complexity

Answer» B. searching

[discuss](#)

54. _____ is a field whose values uniquely determine the records in the file.

- A. pointer
- B. primary key
- C. secondary key
- D. function

Answer» B. primary key

[discuss](#)

55. By using which of the following methods sorting is not possible?

- A. insertion

Answer» D. deletion

55. By using which of the following methods sorting is not possible?

- B. exchange
- C. selection
- D. deletion

Answer» D. deletion

[discuss](#)

56. Which is the simplest file structure?

- A. sequential
- B. indexed
- C. random
- D. bubble

Answer» A. sequential

[discuss](#)

57. A _____ is a data structure use for a storage of a records.

- A. tree
- B. hash table
- C. stack
- D. graph

Answer» B. hash table

[discuss](#)

58. _____ is a search for data that uses an index to locate the item.

- A. binary search
- B. sequential search
- C. indexed search
- D. jump search

Answer» C. indexed search

[discuss](#)

59. If the input array is unsorted, then only a linear _____ can be used.

- A. binary search
- B. sequential search
- C. indexed search
- D. jump search

Answer» B. sequential search

60. _____ is a attribute of a sort, indicating that data with equal keys maintain their relative input order in the output.

- A. sort order
- B. sort stability
- C. sort efficiency
- D. collision

Answer» B. sort stability

[discuss](#)

61. In _____ method of hashing, selected digit are extracted from the key and used as the address.

- A. subtraction
- B. digit extraction
- C. rotation
- D. folding

Answer» B. digit extraction

[discuss](#)

62. _____ hashing method is used in combination with other methods.

- A. subtraction
- B. digit extraction
- C. rotation
- D. division

Answer» C. rotation

[discuss](#)

63. If two different keys yield the same hash address, it is called _____ .

- A. binary search
- B. sequential search
- C. collision
- D. rotation

Answer» C. collision

[discuss](#)

64. The _____ sort algorithm is called diminishing increment sort.

- A. merge
- B. radix
- C. shell
- D. selection

Answer» C. shell

[discuss](#)

65. A _____ merge sort uses a constant number of input merge files and the same number of output merge files.

- A. k-way
- B. balanced
- C. polyphase
- D. radix

Answer» B. balanced

[discuss](#)

66. _____ method of collision resolution involves maintaining two tables in memory.

- A. linear probing
- B. chaining
- C. quadratic probing
- D. double hashing

Answer» B. chaining

[discuss](#)

67. _____ is a merge sort that sorts a data stream using repeated merges.

- A. balanced
- B. polyphase
- C. radix
- D. k-way

Answer» D. k-way

[discuss](#)

68. One of the statement is false

- A. tree is an abstract data type
- B. array is a linear data structure

Answer» C. typedef is derived data type

68. One of the statement is false

- C. typedef is derived data type
- D. float is built in data type

Answer» C. typedef is derived data type

[discuss](#)

69. Examples of sorting algorithms are

- A. bubble sort
- B. selection sort
- C. insertion sort
- D. (a),(b),and ©

Answer» D. (a),(b),and ©

[discuss](#)

70. Give timing complexities of three sorting algorithms bubble sort,selection sort,insertion sort respectively.

- A. $O(\log n)$, $O(\log n)$, $O(\log n)$
- B. $O(n^2)$, $O(n^2)$, $O(n^2)$
- C. $O(n^2)$, $O(n \log n)$, $O(n \log n)$
- D. $O(n \log n)$, $O(n^2)$, $O(n \log n)$

Answer» B. $O(n^2)$, $O(n^2)$, $O(n^2)$

[discuss](#)

71. ____passes are required to sort n data using bubble sort.

- A. n
- B. n-1
- C. n+2
- D. n-2

Answer» B. n-1

[discuss](#)

72. Best and the worst case timing complexities of insertion sort are_____.

- A. $O(n^2)$, $O(n^2)$
- B. $O(n \log n)$, $O(n^2)$
- C. $O(n)$, $O(n^2)$
- D. $O(n)$, $O(n^3)$

Answer» C. $O(n)$, $O(n^2)$

[discuss](#)

73. Which sorting algorithm can exploit the partially sorted data in a list?

- A. bubble sort
- B. selection sort
- C. insertion sort
- D. all of them

Answer» C. insertion sort

[discuss](#)

74. Sorting is useful for_____

- A. report generation
- B. minimizing the storage needed
- C. making searching easier and efficient
- D. responding to queries easily

Answer» C. making searching easier and efficient

[discuss](#)

75. The getch() library function returns__

- A. a character when any key is pressed
- B. a character when enter is pressed
- C. displays a character on the screen when any key is pressed
- D. none of these

Answer» A. a character when any key is pressed

[discuss](#)

76. The function islower(char) checks whether a character is in lower case or not. Therefore it should return_____

- A. 0 or 1
- B. -1, 0 or 1
- C. a character
- D. nothing

Answer» A. 0 or 1

[discuss](#)

77. A variable P is called pointer if__

- A. p contains the address of an element in data
- B. p points to the address of first element in data

Answer» A. p contains the address of an element in data

77. A variable P is called pointer if__

- C. p can store only memory address
- D. p contain the data and the address of data

Answer» A. p contains the address of an element in data

[discuss](#)

78. Which of the following data structure can't store the non-homogeneous data element?

- A. arrays
- B. records
- C. pointers
- D. none

Answer» A. arrays

[discuss](#)

79. The difference between linear array and a record is_____

- A. an array is suitable for homogeneous data but the data items in a record may have different data type
- B. in a record, there may not be a natural ordering in opposed to linear array
- C. a record form a hierarchical structure but a linear array does not
- D. all of above

Answer» D. all of above

[discuss](#)

80. If s1 is "ABC" and s2 is "DEF" then strcat(s1,s2) will give the following result.

- A. s1="abcdef" and s2="def"
- B. s1="abcdef" and s2="def"
- C. s1="abc" and s2="abcdef"
- D. s1="abc" and s2="abcdef"

Answer» A. s1="abcdef" and s2="def"

[discuss](#)

81. Give output of the following program `int main(){int a[]={2,3,4,5,6};printf("%d",2[a]);}`

- A. compilation error
- B. run time error
- C. 4
- D. 2

Answer» C. 4

[discuss](#)

82. Where do we use the operator --> ?

- A. to access a member of structure
- B. to access member of union
- C. to access an array
- D. both(a) and(b).

Answer» D. both(a) and(b).

[discuss](#)

83. The function strcmp(s1,s2)will return -1 if____

- A. $s1 > s2$
- B. $s1 = s2$
- C. $s1 < s2$
- D. function does not return -1.

Answer» C. $s1 < s2$

[discuss](#)

84. Which of the following data structure store the homogeneous data elements?

- A. arrays
- B. records
- C. pointers
- D. none

Answer» A. arrays

[discuss](#) ⁽¹⁾

85. The number of comparisons required to sort 5 numbers in ascending order using bubble sort are

- A. 7
- B. 6
- C. 10
- D. 5

Answer» C. 10

[discuss](#)

86. A sorting algorithm is stable if

- A. its time complexity is constant irrespective of the nature of input
- B. preserves the original order of records with equal keys

Answer» B. preserves the original order of records with equal keys

86. A sorting algorithm is stable if

- C. its space complexity is constant irrespective of the nature of input
- D. it sorts any volume of data in a constant time

Answer» B. preserves the original order of records with equal keys

[discuss](#)

87. The average case complexity of Insertion Sort is

- A. $O(2n)$
- B. $O(n^3)$
- C. $O(n^2)$
- D. $O(2n)$

Answer» C. $O(n^2)$

[discuss](#)

88. A sorted file contains 16 items. Using binary search, the maximum number of comparisons to search for an item in this file is

- A. 15
- B. 8
- C. 1
- D. 4

Answer» D. 4

[discuss](#)

89. A sort which compares adjacent elements in a list and switches where necessary is

- A. insertion sort
- B. heap sort
- C. quick sort
- D. bubble sort

Answer» D. bubble sort

[discuss](#)

90. A sort which iteratively passes through a list to exchange the first element with any element less than it and then repeats with a new first element is called

- A. insertion sort
- B. selection sort
- C. heap sort

Answer» B. selection sort

90. A sort which iteratively passes through a list to exchange the first element with any element less than it and then repeats with a new first element is called

D. quick sort

Answer» B. selection sort

[discuss](#)

91. The number of swappings needed to sort the numbers 8, 22, 7, 9, 31, 19, 5, 13 in ascending order, using bubble sort is

A. 11

B. 12

C. 13

D. 14

Answer» D. 14

[discuss](#)

92. A sorting technique that guarantees that records with the same primary key occurs in the same order in the sorted list as in the original unsorted list is said to be

A. stable

B. consistent

C. external

D. linear

Answer» A. stable

[discuss](#)

93. You want to check whether a given set of items is sorted. Which of the following sorting methods will be most efficient if it is already in sorted order?

A. bubble sort

B. selection sort

C. insertion sort

D. merge sort

Answer» C. insertion sort

[discuss](#)

94. Which of the following sorting methods will be the best if number of swappings done, is the only measure of efficiency?

A. bubble sort

B. selection sort

Answer» B. selection sort

94. Which of the following sorting methods will be the best if number of swappings done, is the only measure of efficiency?

C. insertion sort

D. merge sort

Answer» B. selection sort

[discuss](#)

95. You are asked to sort 15 randomly generated numbers. You should prefer

A. bubble sort

B. selection sort

C. insertion sort

D. merge sort

Answer» A. bubble sort

[discuss](#)

96. What is the number of swaps required to sort n elements using selection sort, in the worst case?

A. $\Theta(n)$

B. $\Theta(n \log n)$

C. $\Theta(n^2)$

D. $\Theta(n^2 \log n)$

Answer» A. $\Theta(n)$

[discuss](#)

97. The number of interchanges required to sort 5, 1, 6, 2, 4 in ascending order using Bubble Sort is

A. 6

B. 5

C. 7

D. 8

Answer» B. 5

[discuss](#)

98. The smallest element of an array's index is called its

A. lower bound

B. upper bound

C. range

D. extraction

Answer» A. lower bound

99. Which of the following sorting methods would be most suitable for sorting a list which is almost sorted

- A. bubble sort
- B. selection sort
- C. insertion sort
- D. merge sort

Answer» A. bubble sort

[discuss](#)

100. The complexity of Bubble sort algorithm is

- A. $O(n)$
- B. $O(\log n)$
- C. $O(n^2)$
- D. $O(n \log n)$

Answer» C. $O(n^2)$

[discuss](#)

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101. A sort which compares adjacent elements in a list and switches wherever necessary is _____

- A. insertion sort
- B. bubble sort
- C. selection sort
- D. none of these

Answer» B. bubble sort

[discuss](#)

102. Which of the following sorting method is the slowest?

- A. quick sort
- B. merge sort
- C. bubble sort
- D. none of these

Answer» C. bubble sort

[discuss](#)

103. Consider that n elements are to be sorted. The worst case complexity of bubble sort is _____

- A. $O(1)$
- B. $O(\log_2 n)$
- C. $O(n)$
- D. $O(n^2)$

Answer» D. $O(n^2)$

[discuss](#)

104. In bubble sort, for a file of size n , after p iterations number of records in proper position is _____

- A. $n-p$
- B. $n-p+1$
- C. $n-p+2$
- D. p

Answer» A. $n-p$

[discuss](#)

105. In bubble sort, for a file of size n , during each p th pass the number of last records left out are _____

- A. $n-p$
- B. $n-p+1$

Answer» D. $p-1$

105. In bubble sort, for a file of size n , during each p th pass the number of last records left out are ____

- C. p
- D. $p-1$

Answer» D. $p-1$

[discuss](#) ⁽¹⁾

106. Given a file size n the number of times a given file is passed through in bubble sort is ____

- A. n^2
- B. $n-1$
- C. $n \log n$
- D. $\log n$

Answer» A. n^2

[discuss](#)

107. Total number of comparison in bubble sort is ____

- A. $O(n \log n)$
- B. $O(n^2)$
- C. $O(n)$
- D. none of these

Answer» B. $O(n^2)$

[discuss](#)

108. A sort which iteratively passes through a list to exchange the first element with any element less than it and then repeats with a new first element is called

- A. insertion sort
- B. selection sort
- C. bubble sort
- D. merge sort

Answer» B. selection sort

[discuss](#)

109. The selection sort is basically a method of repeated

- A. interchange
- B. searching
- C. position adjustment
- D. none of these

Answer» C. position adjustment

110. In selection sort of n elements, how many times is the swp function called in the complete execution of the algorithm?

- A. 1
- B. $n-1$
- C. $n(n-1)/2$
- D. none of these

Answer» B. $n-1$

[discuss](#)

111. If two strings are identical then strcmp() function returns____

- A. -1
- B. 1
- C. 0
- D. none of these

Answer» C. 0

[discuss](#)

112. How will you print `\n` on screen?

- A. `printf("\\n");`
- B. `printf(\\n\\);`
- C. `echo\\\\n;`
- D. `printf("\\\\\\\\n");`

Answer» A. `printf("\\n");`

[discuss](#)

113. Following function is used to find the first occurrence of given string in another string

- A. strchr
- B. strnset
- C. strstr
- D. strrchr

Answer» D. strrchr

[discuss](#)

114. Which of the following is more appropriate for reading a multi_word string?

- A. printf
- B. scanf
- C. put
- D. gets

Answer» D. gets

[discuss](#)

115. What will be the output of the following code? `Int main(){printf("Hello","Word\n");return 0;}`

- A. hello
- B. hello world
- C. world
- D. none of these

Answer» A. hello

[discuss](#)

116. What will be the output of the following code? `Int main(){char str[9]="My Computer";printf("%s\n",str);return 0;}`

- A. mycompute
- B. syntax error
- C. runtime error
- D. none of these

Answer» B. syntax error

[discuss](#)

117. Pointer is a_____

- A. a keyword used to create a variable
- B. a variable that stores the address of some instruction
- C. a variable that stores the address of some other variable
- D. all of the above

Answer» C. a variable that stores the address of some other variable

[discuss](#)

118. ____operator is used to get the value stored at address stored in pointer variable

- A. *
- B. &

Answer» A. *

118. ____ operator is used to get the value stored at address stored in pointer variable

C. dot

D. +

Answer» A. *

[discuss](#)

119. Which of the following statement is true about char ****a ?

A. a is pointer to a pointer to a pointer to char

B. a is pointer to a pointer to a pointer to char

C. a is a pointer to a char pointer

D. a is a pointer to a pointer to a char

Answer» B. a is pointer to a pointer to a pointer to char

[discuss](#)

120. Are *ptr++ and ++*ptr are same?

A. no they are not same

B. yes they are one and the same

C. depends upon the value of ptr

D. none of these

Answer» A. no they are not same

[discuss](#)

121. What will be the output of the following code? Void main(){int a=10;int *b=&a;int **c=&b;printf("%d %d %d",a,*b,**c);}

A. 10 10 garbage

B. 10 garbage garbage

C. 10 10 10

D. syntax error

Answer» C. 10 10 10

[discuss](#)

122. Which of the following is a collection of different data type elements?

A. array

B. structure

C. string

D. all of the above

Answer» B. structure

123. What is the similarity between structure, union and enum?

- A. all of them let you define new values
- B. all of them let you define new pointers
- C. all of them let you define new structure
- D. all of them let you define new data types

Answer» D. all of them let you define new data types

[discuss](#)

124. Which of the following can not be a structure member?

- A. another structure
- B. array
- C. function
- D. none of these

Answer» C. function

[discuss](#)

125. The members of the union are accessed by ____

- A. dot operator
- B. pointer -> operator
- C. both a and b
- D. none of these

Answer» C. both a and b

[discuss](#)

126. a-> is systematically correct if ____

- A. a is a pointer to a structure in which b is a field
- B. a and b are structure
- C. a is a structure and b is a pointer to a structure
- D. a is a pointer to a structure and b is a structure

Answer» A. a is a pointer to a structure in which b is a field

[discuss](#)

127. How many bits are absolutely necessary to store an ASCII character ?

- A. 7

Answer» A. 7

127. How many bits are absolutely necessary to store an ASCII character ?

- B. 8
- C. 15
- D. 16

Answer» A. 7

[discuss](#)

128. The result of $0001\ 1010 / 0001\ 0101$ is

- A. 0001 1111
- B. 1111 0001
- C. 0001 0000
- D. none of these

Answer» A. 0001 1111

[discuss](#)

129. The result of $0001\ 1010 \& 0000\ 1000$ is ____

- A. 0001 1111
- B. 1111 0001
- C. 0000 1000
- D. none of these

Answer» C. 0000 1000

[discuss](#)

130. The result of $0001\ 1010 \sim 0100\ 0011$ is

- A. 0101 1001
- B. 1010 0100
- C. 0000 0010
- D. none of these

Answer» B. 1010 0100

[discuss](#)

131. The result of $0001\ 1010 \wedge 0001\ 0000$ is ____

- A. 0101 1001
- B. 1010 0100
- C. 0000 0010

Answer» C. 0000 0010

131. The result of $0001\ 1010 \wedge 0001\ 0000$ is ____

D. none of these

Answer» C. 0000 0010

[discuss](#)

132. The result of $0001\ 1010 \ll 2$ is ____

A. 0101 1100

B. 0110 1000

C. 0001 1110

D. none of these

Answer» B. 0110 1000

[discuss](#)

133. The result of $0001\ 1010 \gg 2$ is ____

A. 0101 1100

B. 0010 1110

C. 0000 0110

D. none of these

Answer» C. 0000 0110

[discuss](#)

134. The most significant bit is lost in following operation

A. \ll

B. \gg

C. $\&$

D. $/$

Answer» A. \ll

[discuss](#)

135. The result of i) true AND false II) false or false

A. i) is true and ii) is true

B. i) is true and ii) is false

C. i) is false and ii) is true

D. i) is false and ii) is false

Answer» D. i) is false and ii) is false

[discuss](#)

136. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
    int i=320;
    char *ptr=(char *)&i;
    printf("%d",*ptr); return 0;
}
```

- A. 320
- B. 1
- C. 64
- D. none of the above

Answer» C. 64

[discuss](#)

137. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
#define x 5+2
int main(){
    int i;
    i=x*x*x;
    printf("%d",i); return 0;
}
```

- A. 343
- B. 27
- C. 133
- D. compiler error

Answer» B. 27

[discuss](#)

138. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
    char c=125;
    c=c+10;
    printf("%d",c); return 0;
}
```

- A. 135
- B. +inf
- C. -121
- D. -8

Answer» C. -121

[discuss](#)

139. What will be output if you will compile and execute the following c code? #include<stdio.h> int main(){
float a=5.2;
if(a==5.2)
printf("Equal");
else if(a<5.2)
printf("Less than");
else
printf("Greater than"); return 0;
}

- A. equal
- B. less than
- C. greater than
- D. compiler error

Answer» B. less than

[discuss](#)

140. What will be output if you will compile and execute the following c code? #include<stdio.h>
int main(){
int i=4,x;
x=++i + ++i + ++i;
printf("%d",x); return 0;
}

- A. 21
- B. 18
- C. 12
- D. compiler error

Answer» A. 21

[discuss](#)

141. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
    int a=2;
    if(a==2){
        a=~a+2<<1;
        printf("%d",a);
    }
    else{
        break;
    } return 0;
}
```

- A. it will print nothing
- B. -3
- C. -2
- D. compiler error

Answer» D. compiler error

[discuss](#)

142. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
    int a=10;
    printf("%d %d %d",a,a++,++a); return 0;
}
```

- A. 12 11 11
- B. 12 10 10
- C. 11 11 12
- D. 10 10 12

Answer» A. 12 11 11

[discuss](#)

143. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
    char *str="Hello world";
    printf("%d",printf("%s",str)); return 0;
}
```

- A. 10hello world
- B. 11hello world
- C. hello world12
- D. hello world13

Answer» D. hello world13

144. What will be output if you will compile and execute the following c code?

```
#include <stdio.h>
#include <string.h>
int main(){
char *str=NULL;
strcpy(str,"cquestionbank");
printf("%s",str); return 0;
}
```

- A. cquestionbank
- B. cquestionbank\\0
- C. (null)
- D. it will print nothing

Answer» C. (null)

[discuss](#)

145. #include <stdio.h>

```
#include <string.h>
int main(){
int i=0;
for(;i<=2;)
printf(" %d",+ +i); return 0;
}
```

- A. 0 1 2 3
- B. 0 1 2
- C. 1 2 3
- D. compiler error

Answer» C. 1 2 3

[discuss ^{\(1\)}](#)

146. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
int x;
for(x=1;x<=5;x++);
printf("%d",x); return 0;
}
```

- A. 4
- B. 5

Answer» C. 6

146. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
    int x;
    for(x=1;x<=5;x++);
    printf("%d",x); return 0;
}
```

- C. 6
- D. compiler error

Answer» C. 6

[discuss](#)

147. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
    printf("%d",sizeof(5.2)); return 0;
}
```

- A. 2
- B. 4
- C. 8
- D. 10

Answer» C. 8

[discuss](#)

148. What will be output if you will compile and execute the following c code?

```
#include <stdio.h>
#include <string.h>
int main(){
    char c='\08';
    printf("%d",c); return 0;
}
```

- A. 8
- B. \8\
- C. 9
- D. compiler error

Answer» D. compiler error

[discuss](#)

149. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
#define call(x,y) x##y
int main(){
int x=5,y=10,xy=20;
printf("%d",xy+call(x,y)); return 0;
}
```

- A. 35
- B. 510
- C. 15
- D. 40

Answer» D. 40

[discuss](#)

150. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int * call();
int main(){ int *ptr;
ptr=call();
printf("%d",*ptr); return 0;
} int * call(){
int a=25;
a++;
return &a;
}
```

- A. 25
- B. 26
- C. any adress
- D. garbage value

Answer» D. garbage value

[discuss](#)

151. What is error in following declaration?

```
struct outer{ int a;  
    struct inner{  
        char c;  
    };  
};
```

- A. nesting of structure is not allowed in c
- B. it is necessary to initialize the member variable
- C. inner structure must have name
- D. outer structure must have name

Answer» C. inner structure must have name

[discuss](#)

152. What will be output if you will compile and execute the following c code? #include<stdio.h> int main(){
 int array[]={10,20,30,40};
 printf("%d",-2[array]); return 0;
}

- A. -60
- B. -30
- C. 60
- D. garbage value

Answer» B. -30

[discuss](#)

153. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){  
    int i=10;  
    static int x=i;  
    if(x==i)  
        printf("Equal");  
    else if(x>i)  
        printf("Greater than");  
    else  
        printf("Less than"); return 0;  
}
```

- A. equal
- B. less than
- C. greater than

Answer» D. compiler error

D. compiler error

Answer» D. compiler error

[discuss](#)

154. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
#define max 5;
int main(){
int i=0;
i=max++;
printf("%d",i++); return 0;
}
```

A. 5

B. 6

C. 7

D. 0

Answer» D. 0

[discuss](#)

155. What will be output if you will compile and execute the following c code? #include<stdio.h>

```
int main(){
double far* p,q;
printf("%d",sizeof(p)+sizeof q); return 0; }
```

A. 12

B. 8

C. 4

D. 1

Answer» A. 12

[discuss](#)

156. C language was invented by

A. abacus

B. charles babage

C. thomson

D. dennis ritchie

Answer» D. dennis ritchie

[discuss](#)

157. The data type created by the data abstraction process is called

- A. class
- B. structure
- C. abstract data type
- D. user defined data type

Answer» C. abstract data type

[discuss](#)

158. A variable which is visible only in the function in which it is defined, is called

- A. static
- B. auto
- C. external
- D. local

Answer» D. local

[discuss](#)

159. Unsigned integers occupies

- A. two bytes
- B. four bytes
- C. one bytes
- D. eight bytes

Answer» C. one bytes

[discuss](#)

160. Which of the following data structure is linear type ?

- A. strings
- B. lists
- C. queues
- D. all of the above

Answer» D. all of the above

[discuss](#)

161. In C, if you pass an array as an argument to a function, what actually gets passed?

- A. value of elements in array
- B. first element of the array

Answer» C. base address of the array

161. In C, if you pass an array as an argument to a function, what actually gets passed?

- C. base address of the array
- D. address of the last element of array

Answer» C. base address of the array

[discuss](#)

162. Which data structure allows deleting data elements from front and inserting at rear?

- A. stack
- B. queue
- C. dequeue
- D. binary search tree

Answer» B. queue

[discuss](#)

163. Queue is a ----- List .

- A. fifo
- B. lifo
- C. lilo
- D. liso

Answer» A. fifo

[discuss](#)

164. Stack is a -----List.

- A. lifo
- B. fifo
- C. lilo
- D. lito

Answer» A. lifo

[discuss](#)

165. A node in a linked list must contain at least

- A. three fields
- B. two fields
- C. four fields
- D. one field

Answer» B. two fields

[discuss](#)

166. An algorithm is made up of two independent time complexities $f(n)$ and $g(n)$. Then the complexities of the algorithm is in the order of

- A. $f(n) \times g(n)$
- B. $\max(f(n), g(n))$
- C. $\min(f(n), g(n))$
- D. $f(n) + g(n)$

Answer» B. $\max(f(n), g(n))$

[discuss](#) ⁽¹⁾

167. Big O notation is defined for

- A. time and space complexity
- B. optimality
- C. seaching
- D. none of the above

Answer» A. time and space complexity

[discuss](#)

168. Consider that n elements are to be sorted. What is the worst case time complexity of Bubble sort?

- A. $o(1)$
- B. $o(\log^2 n)$
- C. $o(n)$
- D. $o(n^2)$

Answer» D. $o(n^2)$

[discuss](#)

169. The complexity of Binary search algorithm is

- A. $o(n)$
- B. $o(\log n)$
- C. $o(n^2)$
- D. $o(n \log n)$

Answer» B. $o(\log n)$

[discuss](#)

170. The complexity of linear search algorithm is

- A. $o(n)$
- B. $o(\log n)$

Answer» A. $o(n)$

170. The complexity of linear search algorithm is

- C. $O(n^2)$
- D. $O(n \log n)$

Answer» A. $O(n)$

[discuss](#)

171. Which of the following data structure is linear data structure?

- A. trees
- B. graphs
- C. arrays
- D. none of above

Answer» C. arrays

[discuss](#)

172. What is the maximum number of dimensions an array in C may have?

- A. two
- B. eight
- C. twenty
- D. theoretically no limit. the only practical limits are memory size and compilers

Answer» D. theoretically no limit. the only practical limits are memory size and compilers

[discuss](#)

173. An external variable

- A. is globally accessible by all functions
- B. has a declaration
- C. will be initialized to 0 if not initialized
- D. all of these

Answer» D. all of these

[discuss](#)

174. The declaration "unsigned u" indicates u is a/an

- A. unsigned character
- B. unsigned integer
- C. character

Answer» B. unsigned integer

174. The declaration "unsigned u" indicates u is a/an

D. none of these

Answer» B. unsigned integer

[discuss](#)

175. A declaration "short int" is used for variables

- A. which have a short duration in a program
- B. which have short names
- C. which may require less storage than normal integers
- D. all of these

Answer» C. which may require less storage than normal integers

[discuss](#)

176. Which of the following 'C' type is not a primitive data structure?

- A. int
- B. float
- C. char
- D. none of these

Answer» D. none of these

[discuss](#)

177. The program fragment

```
int i = 263 ;  
putchar (i) ;  
prints
```

- A. 263
- B. ascii equivalent of 263
- C. rings the bell
- D. garbage

Answer» C. rings the bell

[discuss](#)

178. The variables which can be accessed by all modules in a program, are called

- A. local variables
- B. internal variables
- C. external variable
- D. global variables

Answer» D. global variables

[discuss](#)

179. The main measures of efficiency of an algorithm are

- A. processor and memory
- B. complexity and capacity
- C. time and space
- D. data and space

Answer» C. time and space

[discuss](#) ⁽¹⁾

180. The worst case occurs in linear search algorithms when

- A. item is somewhere in the middle of the array
- B. item is not there in the array at all
- C. item is last element in the array
- D. item is last element in the array or is not there at all.

Answer» D. item is last element in the array or is not there at all.

[discuss](#)

181. the terms push and pop are related to

- A. stack
- B. queue
- C. array
- D. none of the above

Answer» A. stack

[discuss](#)

182. What will be the output of the program? #include<stdio.h>

```
int main()
{
    int X=40;
    {
        int X=20;
        printf("%d ", X);
    }
    printf("%d\n", X);
    return 0;
}
```

- A. 40 40
- B. 20 20
- C. 20
- D. error

Answer» D. error

[discuss](#)

183. What additional requirement is placed on an array, so that binary search may be used to locate an entry?

- A. the array elements must form a heap
- B. the array must have at least 2 entries.
- C. the array must be sorted.
- D. the array's size must be a power of two.

Answer» C. the array must be sorted.

[discuss](#)

184. One difference between a queue and a stack is:

- A. queues require dynamic memory, but stacks do not.
- B. stacks require dynamic memory, but queues do not
- C. queues use two ends of the structure; stacks use only one.
- D. stacks use two ends of the structure, queues use only one.

Answer» C. queues use two ends of the structure; stacks use only one.

[discuss](#)

185. If the characters 'D', 'C', 'B', 'A' are placed in a queue (in that order), and then removed one at a time, in what order will they be removed?

- A. abcd

Answer» D. dcba

185. If the characters 'D', 'C', 'B', 'A' are placed in a queue (in that order), and then removed one at a time, in what order will they be removed?

- B. abdc
- C. dcab
- D. dcba

Answer» D. dcba

[discuss](#)

186. Which of the following formulas in big-O notation best represent the expression $n^2 + 35n + 6$?

- A. $o(n^3)$
- B. $o(n^2)$
- C. $o(n)$
- D. $o(42)$

Answer» B. $o(n^2)$

[discuss](#)

187. What term is used to describe an $O(n)$ algorithm

- A. constant
- B. linear
- C. logarithmic
- D. quadratic

Answer» B. linear

[discuss](#)

188. The keyword used to transfer control from a function back to the calling function is

- A. switch
- B. goto
- C. go back
- D. return

Answer» D. return

[discuss](#)

189. How many times the program will print "Amrutvahini" ? #include<stdio.h>

```
int main()
{
    printf("Amrutvahini");
    main();
    return 0;
}
```

- A. infinite times
- B. 32767 times
- C. 65535 times
- D. till stack overflows

Answer» D. till stack overflows

[discuss](#)

190. What will be the output of the program? #include<stdio.h>

```
int i;
int fun();

int main()
{
    while(i)
    {
        fun();
        main();
    }
    printf("Hello\n");
    return 0;
}
int fun()
{
    printf("Hi");
}
```

- A. hello
- B. hi hello
- C. no output
- D. infinite loop

Answer» A. hello

[discuss](#)

191. In a linked list, the pointer of the last node contains a special value, called the _____ pointer.

- A. null
- B. zero
- C. link
- D. next pointer

Answer» A. null

[discuss](#)

192. In a _____ linked list, the last node's link field points to the first node of the list.

- A. circularly
- B. linearly
- C. sequentially
- D. indexed

Answer» A. circularly

[discuss](#)

193. The second part of the node, is called _____ field, and contains the address of the next node in the list.

- A. pointer
- B. field
- C. node
- D. link

Answer» D. link

[discuss](#)

194. The link list also contains a list pointer variable called start or _____.

- A. name
- B. field
- C. node
- D. link

Answer» A. name

[discuss](#)

195. A _____ linked list is a linked list structure in which each node has a pointer to both its successor and predecessor.

- A. circularly
- B. doubly

Answer» B. doubly

195. A _____ linked list is a linked list structure in which each node has a pointer to both its successor and predecessor.

- C. linear
- D. sequential

Answer» B. doubly

[discuss](#)

196. _____ list is a special list that is maintained, which consists of unused memory cells.

- A. linear
- B. doubly linked
- C. circularly linked
- D. free storage

Answer» D. free storage

[discuss](#)

197. _____ is a technique using which a computer periodically collects all the deleted space onto the free storage list.

- A. garbage collection
- B. garbage compaction
- C. linked list
- D. free storage

Answer» A. garbage collection

[discuss](#)

198. _____ attacks the problem of fragmentation by moving all the allocated blocks to one end of memory, thus combining all the holes.

- A. underflow
- B. overflow
- C. compaction
- D. free storage

Answer» B. overflow

[discuss](#)

199. A _____ linked list is a linked list which always contains a special node, called the header node.

- A. circular
- B. grounded
- C. header

Answer» C. header

199. A _____ linked list is a linked list which always contains a special node, called the header node.

D. doubly

Answer» C. header

[discuss](#)

200. A polynomial can be represented in a _____ by just storing the coefficient and exponent of each term.

A. array

B. linked list

C. queue

D. stack

Answer» B. linked list

[discuss](#)

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201. _____ refers to situation where one wants to delete data form a data structure that is empty.

- A. free storage
- B. underflow
- C. overflow
- D. compaction

Answer» B. underflow

[discuss](#)

202. _____ is an organization that provides faster request and return time response.

- A. stack
- B. queue
- C. buddy system
- D. recursion

Answer» C. buddy system

[discuss](#)

203. _____ attacks the problem of fragmentation by moving all the allocated blocks to one end of memory, thus combining all the holes.

- A. garbage collection
- B. garbage compaction
- C. buddy system
- D. queue

Answer» B. garbage compaction

[discuss](#)

204. A _____ list structure can be traversed in two directions-- in the forward direction from beginning of the list to end, or in the backward direction, from the end of the list to the beginning.

- A. one way
- B. linear array
- C. two way
- D. header

Answer» C. two way

[discuss](#)

205. _____ header list combines the advantages of a two-way list and a circular header list.

- A. one way
- B. two way circular
- C. two way
- D. header

Answer» B. two way circular

[discuss](#)

206. In linked list, a node contains

- A. node, address field and data field
- B. node number and data field
- C. next address field and information field
- D. none of the above

Answer» C. next address field and information field

[discuss](#)

207. In linked list, the logical order of elements

- A. is same as their physical arrangement
- B. is not necessarily equivalent to their physical arrangement
- C. is determined by their physical arrangement
- D. none of the above

Answer» B. is not necessarily equivalent to their physical arrangement

[discuss](#)

208. Null pointer is used to tell

- A. end of linked list
- B. empty pointer field of a structure
- C. the linked list is empty
- D. all of the above

Answer» D. all of the above

[discuss](#)

209. List pointer variable in linked list contains address of the

- A. following node in the first
- B. current node in the first
- C. first node in the first

Answer» C. first node in the first

209. List pointer variable in linked list contains address of the

D. none of the above

Answer» C. first node in the first

[discuss](#)

210. Because of linear structure of linked list having linear ordering, there is similarity between linked list and array in

- A. insertion of a node
- B. deletion of a node
- C. traversal of elements of list
- D. none of the above

Answer» C. traversal of elements of list

[discuss](#)

211. Searching of linked list requires linked list to be created

- A. in stored order only
- B. in any order
- C. without underflow condition
- D. none of the above

Answer» B. in any order

[discuss](#)

212. A circular list can be used to represent

- A. a stack
- B. a queue
- C. a tree
- D. both a and b

Answer» D. both a and b

[discuss](#)

213. To insert a node in a circular list at rear end it should be inserted atof the queue

- A. front position
- B. front-1 position
- C. rear position
- D. rear-1 position

Answer» C. rear position

[discuss](#)

214. In a circularly linked list organisation ,insertion of a record involves the modifications of

- A. no pointer
- B. 1 pointer
- C. 2 pointer
- D. 3 pointer

Answer» B. 1 pointer

[discuss](#)

215. What is true about linked list?

- A. it is a linked structure,where each data gives the address of the next data
- B. it is a dynamic data structure
- C. it is a static data structure
- D. both (a) and (b)

Answer» A. it is a linked structure,where each data gives the address of the next data

[discuss](#)

216. A node of linked list contains_____

- A. data field
- B. a self referential pointer
- C. both (a)and(b)
- D. only b

Answer» C. both (a)and(b)

[discuss](#)

217. Which nodes contains a null pointer in a linked list?

- A. first node
- B. middle node
- C. last node
- D. both (a) and (b)

Answer» C. last node

[discuss](#)

218. Deletion of a node from an empty linked list will cause_____

- A. underflow
- B. overflow

Answer» A. underflow

218. Deletion of a node from an empty linked list will cause_____

- C. run time error
- D. all of the above

Answer» A. underflow

[discuss](#)

219. Insertion in a linked list requires modification of____pointers

- A. 1
- B. 2
- C. 3
- D. 4

Answer» B. 2

[discuss](#)

220. Deletion in a linked list requires modification of____pointers

- A. 1
- B. 2
- C. 3
- D. 4

Answer» A. 1

[discuss](#)

221. Accessing time of nth node in a linked list is_____

- A. $O(n)$
- B. $O(1)$
- C. $O(n^2)$
- D. $O(\log n)$

Answer» A. $O(n)$

[discuss](#)

222. An array is referenced by its name. Similarly, a linked list is referenced by____

- A. address of the first node
- B. address of the last node
- C. both (a) and (b)
- D. none of these

Answer» A. address of the first node

[discuss](#)

223. Time required to search an element in a linked list is____

- A. $O(n)$
- B. $O(\log n)$
- C. $O(n^2)$
- D. $O(n \log n)$

Answer» A. $O(n)$

[discuss](#)

224. Time required to search an element in a sorted linked list is_____

- A. $O(n)$
- B. $O(\log n)$
- C. $O(n^2)$
- D. $O(n \log n)$

Answer» A. $O(n)$

[discuss](#)

225. Time required to delete a node with given address in a linked list is____

- A. $O(n)$
- B. $O(\log n)$
- C. $O(1)$
- D. $O(n \log n)$

Answer» A. $O(n)$

[discuss](#)

226. Select the set of instructions to insert a node pointed by q after a node pointed by p

- A. $q \rightarrow \text{next} = p \rightarrow \text{next}; p \rightarrow \text{next} = q;$
- B. $p \rightarrow \text{next} = q; q \rightarrow \text{next} = p \rightarrow \text{next}$
- C. both (a) and (b)
- D. none of these

Answer» A. $q \rightarrow \text{next} = p \rightarrow \text{next}; p \rightarrow \text{next} = q;$

[discuss](#)

227. select the set of operations to insert a node pointed by q at the beginning of the linked list

- A. $q \rightarrow \text{next} = \text{head}; \text{head} = q;$
- B. $\text{head} = q; q \rightarrow \text{next} = \text{head};$

Answer» A. $q \rightarrow \text{next} = \text{head}; \text{head} = q;$

227. select the set of operations to insert a node pointed by q at the beginning of the linked list

- C. both (a) and (b)
- D. none of these

Answer» A. `q->next=head; head=q;`

[discuss](#)

228. Select the set of operations to delete the first node from a linked list

- A. `p=head; head=head->next; free(p);`
- B. `free(head)`
- C. `head=head->next; p=head; free(p)`
- D. none of these

Answer» A. `p=head; head=head->next; free(p);`

[discuss](#)

229. Select the correct looping condition for positioning a pointer p on the second last in a linked list. Assume p=head, initially.

- A. `p->next->next!=null`
- B. `p->next=null`
- C. `p!=null`
- D. none of these

Answer» A. `p->next->next!=null`

[discuss](#)

230. If address of the 8th element in a linked list of integers is 1022, then address of the 9th element is

- A. 1024
- B. 1026
- C. 1023
- D. unknown

Answer» D. unknown

[discuss](#)

231. The advantages of linked list over an array for representing a list is _____

- A. space used is less
- B. deletion is easier
- C. insertion is easier
- D. both (a) and (b)

Answer» D. both (a) and (b)

232. The address returned by malloc() is type casted because

- A. malloc returns integers pointer
- B. malloc returns void pointer
- C. malloc returns an integer value
- D. none of these

Answer» B. malloc returns void pointer

[discuss](#)

233. Which function returns a void pointer?

- A. malloc returns integers pointer
- B. calloc
- C. both (a) and (b)
- D. none of these

Answer» C. both (a) and (b)

[discuss](#)

234. Select the correct statement

- A. free is used to release memory allocated by malloc
- B. free is used to release memory allocated by calloc
- C. both (a) and (b)
- D. only (a) but not (b)

Answer» C. both (a) and (b)

[discuss](#)

235. The ___ linked list can be processed in either direction.

- A. singly
- B. singly circular
- C. doubly
- D. none of these

Answer» C. doubly

[discuss](#)

236. A polynomial in single variable should be handled using ___

- A. an array of structure

Answer» D. both (a) and (b)

236. A polynomial in single variable should be handled using__

- B. singly linked list
- C. gll
- D. both (a) and (b)

Answer» D. both (a) and (b)

[discuss](#)

237. A node of doubly linked contains

- A. pointer to predecessor
- B. pointer to sucessor
- C. both (a)and(b)
- D. only(a)

Answer» C. both (a)and(b)

[discuss](#)

238. Each node in a linear list contains an item called____ which points to the next node in the list.

- A. node
- B. link
- C. variable
- D. null

Answer» B. link

[discuss](#)

239. Which is not dynamic memory allocation function?

- A. malloc returns integers pointer
- B. calloc
- C. alloc
- D. free

Answer» C. alloc

[discuss](#)

240. The function that allocates requested size of bytes and returns a pointer to the first byte of the allocated space is

- A. realloc
- B. malloc
- C. free

Answer» B. malloc

240. The function that allocates requested size of bytes and returns a pointer to the first byte of the allocated space is

- D. none of these

Answer» B. malloc

[discuss](#)

241. NULL link is not present in...

- A. singly linked list
- B. doubly linked list
- C. circular linked list
- D. none of these

Answer» C. circular linked list

[discuss](#)

242. In a circular linked list

- A. components are all linked together in some sequential manner.
- B. there is no beginning and no end.
- C. components are arranged hierarchically.
- D. forward and backward traversal within the list is permitted.

Answer» B. there is no beginning and no end.

[discuss](#)

243. A linear collection of data elements where the linear node is given by means of pointer is called?

- A. linked list
- B. node list
- C. primitive list
- D. none

Answer» A. linked list

[discuss](#)

244. Which of the following operations is performed more efficiently by doubly linked list than by singly linked list?

- A. deleting a node whose location is given
- B. searching of an unsorted list for a given item
- C. inverting a node after the node with given location
- D. traversing a list to process each node

Answer» A. deleting a node whose location is given

[discuss](#)

245. Consider an implementation of unsorted singly linked list. Suppose it has its representation with a head and tail pointer. Given the representation, which of the following operation can be implemented in $O(1)$ time?

- i) Insertion at the front of the linked list
- ii) Insertion at the end of the linked list
- iii) Deletion of the front node of the linked list
- iv) Deletion of the last node of the linked list

- A. i and ii
- B. i and iii
- C. i, ii and iii
- D. i, ii and iv

Answer» C. i, ii and iii

[discuss](#)

246. Consider an implementation of unsorted singly linked list. Suppose it has its representation with a head pointer only. Given the representation, which of the following operation can be implemented in $O(1)$ time?

- i) Insertion at the front of the linked list
- ii) Insertion at the end of the linked list
- iii) Deletion of the front node of the linked list
- iv) Deletion of the last node of the linked list

- A. i and ii
- B. i and iii
- C. i, ii and iii
- D. i, ii and iv

Answer» B. i and iii

[discuss](#)

247. Consider an implementation of unsorted doubly linked list. Suppose it has its representation with a head pointer and tail pointer. Given the representation, which of the following operation can be implemented in $O(1)$ time?

- i) Insertion at the front of the linked list
- ii) Insertion at the end of the linked list
- iii) Deletion of the front node of the linked list
- iv) Deletion of the end node of the linked list

- A. i and ii
- B. i and iii

Answer» D. i, ii, iii and iv

247. Consider an implementation of unsorted doubly linked list. Suppose it has its representation with a head pointer and tail pointer. Given the representation, which of the following operation can be implemented in $O(1)$ time?

- i) Insertion at the front of the linked list
- ii) Insertion at the end of the linked list
- iii) Deletion of the front node of the linked list
- iv) Deletion of the end node of the linked list

- C. i,ii and iii
- D. i,ii,iii and iv

Answer» D. i,ii,iii and iv

[discuss](#)

248. In linked list each node contain minimum of two fields. One field is data field to store the data second field is?

- A. pointer to character
- B. pointer to integer
- C. pointer to node
- D. node

Answer» C. pointer to node

[discuss](#)

249. What would be the asymptotic time complexity to add a node at the end of singly linked list, if the pointer is initially pointing to the head of the list?

- A. $o(1)$
- B. $o(n)$
- C. $\theta(n)$
- D. $\theta(1)$

Answer» C. $\theta(n)$

[discuss](#)

250. What would be the asymptotic time complexity to add an element in the linked list?

- A. $o(1)$
- B. $o(n)$
- C. $o(n^2)$
- D. none

Answer» B. $o(n)$

[discuss](#)

251. What would be the asymptotic time complexity to find an element in the linked list?

- A. $O(1)$
- B. $O(n)$
- C. $O(n^2)$
- D. none

Answer» B. $O(n)$

[discuss](#)

252. What would be the asymptotic time complexity to insert an element at the second position in the linked list?

- A. $O(1)$
- B. $O(n)$
- C. $O(n^2)$
- D. none

Answer» A. $O(1)$

[discuss](#)

253. The concatenation of two list can be performed in $O(1)$ time. Which of the following variation of linked list can be used?

- A. singly linked list
- B. doubly linked list
- C. circular doubly linked list
- D. array implementation of list

Answer» C. circular doubly linked list

[discuss](#)

254. Consider the following definition in c programming language

```
struct node
{
    int data;
    struct node * next;
}
typedef struct node NODE;
NODE *ptr;
```

Which of the following c code is used to create new node?

Answer» A. `ptr=(node*)malloc(sizeof(node));`

- A. `ptr=(node*)malloc(sizeof(node));`
- B. `ptr=(node*)malloc(node);`
- C. `ptr=(node*)malloc(sizeof(node*));`
- D. `ptr=(node)malloc(sizeof(node));`

Answer» A. `ptr=(node*)malloc(sizeof(node));`

[discuss](#)

255. A variant of linked list in which last node of the list points to the first node of the list is?

- A. singly linked list
- B. doubly linked list
- C. circular linked list
- D. multiply linked list

Answer» C. circular linked list

[discuss](#)

256. In doubly linked lists, traversal can be performed?

- A. only in forward direction
- B. only in reverse direction
- C. in both directions
- D. none

Answer» C. in both directions

[discuss](#)

257. What kind of linked list is best to answer question like "What is the item at position n?"

- A. singly linked list
- B. doubly linked list
- C. circular linked list
- D. array implementation of linked list

Answer» D. array implementation of linked list

[discuss](#)

258. A variation of linked list is circular linked list, in which the last node in the list points to first node of the list. One problem with this type of list is?

- A. it waste memory space since the pointer head already points to the first node and thus the list node does not need to point to the first node.
- B. it is not possible to add a node at the end of the list.

Answer» C. it is difficult to traverse the list as the pointer of the last node is now not null

258. A variation of linked list is circular linked list, in which the last node in the list points to first node of the list. One problem with this type of list is?

- C. it is difficult to traverse the list as the pointer of the last node is now not null
- D. all of above

Answer» C. it is difficult to traverse the list as the pointer of the last node is now not null

[discuss](#)

259. A variant of the linked list in which none of the node contains NULL pointer is?

- A. singly linked list
- B. doubly linked list
- C. circular linked list
- D. none

Answer» C. circular linked list

[discuss](#)

260. In circular linked list, insertion of node requires modification of?

- A. one pointer
- B. two pointer
- C. three pointer
- D. none

Answer» B. two pointer

[discuss](#)

261. Which of the following statements about linked list data structure is/are TRUE?

- A. addition and deletion of an item to/ from the linked list require modification of the existing pointers
- B. the linked list pointers do not provide an efficient way to search an item in the linked list
- C. linked list pointers always maintain the list in ascending order
- D. the linked list data structure provides an efficient way to find kth element in the list

Answer» B. the linked list pointers do not provide an efficient way to search an item in the linked list

[discuss](#)

262. Linked lists are not suitable to for the implementation of?

- A. insertion sort
- B. radix sort
- C. polynomial manipulation
- D. binary search

Answer» D. binary search

263. In worst case, the number of comparison need to search a singly linked list of length n for a given element is

- A. $\log n$
- B. $n/2$
- C. $\log_2 n - 1$
- D. n

Answer» D. n

[discuss](#)

264. consider the function f defined here:

```
struct item
{
    int data;
    struct item * next;
};
int f (struct item *p)
{
    return((p==NULL) ||((p->next==NULL)||(p->data<=p->next->data) && (p->next)));
}
```

For a given linked list p , the function f returns 1 if and only if

- A. the list is empty or has exactly one element
- B. the element in the list are sorted in non-decreasing order of data value
- C. the element in the list are sorted in non-increasing order of data value
- D. not all element in the list have the same data value

Answer» B. the element in the list are sorted in non-decreasing order of data value

[discuss](#)

265. Finite sequence S of Zero or more chatacters is called____

- A. array
- B. list
- C. string
- D. block

Answer» C. string

[discuss](#)

266. String with zero characters is called___string

- A. null
- B. binary
- C. totalled
- D. list

Answer» A. null

[discuss](#)

267. Groups of consecutive element in a string. Such as words, phrase and sentences are called___

- A. main string
- B. substring
- C. index
- D. block

Answer» B. substring

[discuss](#)

268. ___operation of word processing involves replacing one string in the text by another.

- A. insertion
- B. deletion is easier
- C. searching
- D. replacement

Answer» D. replacement

[discuss](#)

269. ___is the problem of deciding whether or not a given string problem p appears in a text T.

- A. pattern matching
- B. searching
- C. sorting
- D. deletion

Answer» A. pattern matching

[discuss](#)

270. If string1=John, and string2=Rivers are merged, the process is called

- A. insertion
- B. deletion

Answer» C. concatenation

270. If `string1=John`, and `string2=Rivers` are merged, the process is called

- C. concatenation
- D. replacement

Answer» C. concatenation

[discuss](#)

271. ____ is a variable whose length may vary during the execution of a program.

- A. dynamic
- B. static
- C. semistatistic
- D. global

Answer» A. dynamic

[discuss](#)

272. `NurseryLand.Nursery.Students = 10;`

- A. the structure `students` is nested within the structure `nursery`
- B. the structure `nurseryland` is nested within the structure `nursery`.
- C. the structure `nursery` is nested within the structure `nurseryland`.
- D. the structure `nursery` is nested within the structure `students`

Answer» C. the structure `nursery` is nested within the structure `nurseryland`.

[discuss](#)

273. If a function is declared as `void fn(int *p)`, then which of the following statements is valid to call function `fn`?

- A. `fn(x)` where `x` is defined as `int x;`
- B. `fn(x)` where `x` is defined as `int *x;`
- C. `fn(&x)` where `x` is defined as `int *x;`
- D. `fn(*x)` where `x` is defined as `int *x;`

Answer» B. `fn(x)` where `x` is defined as `int *x;`

[discuss](#)

274. To declare an array `S` that holds a 5-character string, you would write

- A. `char s[5]`
- B. `char s[6]`
- C. `string s[5]`
- D. `stringchar s[5]`

Answer» A. `char s[5]`

275. The constructed datatype in C is known as

- A. string
- B. array
- C. structure
- D. pointer

Answer» C. structure

[discuss](#)

276. A structure definition is called as

- A. template
- B. member
- C. both 1 & 2
- D. none of these

Answer» A. template

[discuss](#)

277. If a, b and c are integer variables with the values a=8, b=3 and c=-5. Then what is the value of the arithmetic expression: $2 * b + 3 * (a - c)$

- A. 15
- B. 6
- C. -16
- D. -1

Answer» A. 15

[discuss](#)

278. A global variable is a variable

- A. declared in the main () function
- B. declared in any function other than the main () function
- C. declared outside the body of every function.
- D. declared any where in the c program.

Answer» C. declared outside the body of every function.

[discuss](#)

279. **main ()** is an example of

- A. library function
- B. user defined function
- C. header
- D. statement

Answer» A. library function

[discuss](#)

280. While incrementing a pointer, its value gets increased by the length of the data type to which it points. This length is called

- A. scale factor
- B. length factor
- C. pointer factor
- D. increment factor

Answer» A. scale factor

[discuss](#)

281. **a->b** is systematically correct if _____

- A. a is a npointer to a structure in which b is a field
- B. a and b are structure
- C. a is a structure and b is a pointer to a structure
- D. a is a pointer to a structure and b is a structure

Answer» A. a is a npointer to a structure in which b is a field

[discuss](#)

282. Which of the following best describes sorting ?

- A. accessing and processing each record exactly once
- B. finding the location of the record with a given key
- C. arranging the data (record) in some given order
- D. adding a new record to the data structure

Answer» C. arranging the data (record) in some given order

[discuss](#)

283. A function which calls itself is called as

- A. library function
- B. directive

Answer» C. recursive function

283. A function which calls itself is called as

- C. recursive function
- D. none of above

Answer» C. recursive function

[discuss](#)

284. Where do we use the operator -> ?

- A. to access a member of structure
- B. to access member of union
- C. to access an array
- D. both(a) and(b).

Answer» D. both(a) and(b).

[discuss](#)

285. In selection sort of n elements, how many times is the swap function called in the complete execution of the algorithm?

- A. 1
- B. n-1
- C. $n(n-1)/2$
- D. none of these

Answer» B. n-1

[discuss](#)

286. a->b is systematically correct if _____

- A. a is a pointer to a structure in which b is a field
- B. a and b are structure
- C. a is a structure and b is a pointer to a structure
- D. a is a pointer to a structure and b is a structure

Answer» A. a is a pointer to a structure in which b is a field

[discuss](#)

287. Literal means

- A. string
- B. string constant
- C. character
- D. alphabet

Answer» B. string constant

288. Each data item in a record may be a group item composed of sub-items; those items which are indecomposable are called

- A. Elementary items
- B. Atoms
- C. Scalars
- D. All of above

Answer» D. All of above

[discuss](#)

289. Which of the following statement is false ?

- A. Arrays are dense lists and static data structure
- B. Data elements in linked list need not be stored in adjacent space in memory
- C. Pointers store the next data element of a list
- D. Linked lists are collection of the nodes that contain information part and next pointer

Answer» C. Pointers store the next data element of a list

[discuss](#)

290. Binary search algorithm cannot be applied to

- A. Sorted binary trees
- B. Sorted linear array
- C. Pointer array
- D. Sorted linked list

Answer» D. Sorted linked list

[discuss](#)

291. When new data are to be inserted into a data structure, but there is no available space; this situation is usually called

- A. Housefull
- B. Saturated
- C. Underflow
- D. Overflow

Answer» D. Overflow

[discuss](#)

292. The situation when in a linked list $START = NULL$ is

- A. Underflow
- B. Overflow
- C. Housefull
- D. Saturated

Answer» A. Underflow

[discuss](#)

293. The following is two-way list

- A. Grounded header list
- B. Circular header list
- C. Linked list with header and trailer nodes
- D. None of above

Answer» D. None of above

[discuss](#)

294. The following name does not relate to stacks

- A. FIFO lists
- B. LIFO list
- C. Piles
- D. Push-down lists

Answer» A. FIFO lists

[discuss](#)

295. In a binary tree, certain null entries are replaced by special pointers which point to nodes higher in tree for efficiency. These special pointers are called

- A. Leaf
- B. Branch
- C. Path
- D. Thread

Answer» D. Thread

[discuss](#)

296. In a graph if $e = (u, v)$ means

- A. e begins at u and ends at v
- B. u is processor and v is successor

Answer» C. both B and C are true

296. In a graph if $e=(u, v)$ means

- C. both B and C are true
- D. none is true

Answer» C. both B and C are true

[discuss](#)

297. If every node u in G is adjacent to every other node v in G , A graph is said to be

- A. Isolated
- B. Complete
- C. Finite
- D. Strongly connected

Answer» B. Complete

[discuss](#)

298. A variable P is called pointer if

- A. P points to the address of first element in DATA
- B. P can store only memory addresses
- C. P contain the DATA and the address of DATA
- D. P contains the address of an element in DATA.

Answer» D. P contains the address of an element in DATA.

[discuss](#)

299. The Worst case occur in linear search algorithm when

- A. Item is not in the array at all
- B. Item is the last element in the array
- C. Item is the last element in the array or is not there at all
- D. None of above

Answer» C. Item is the last element in the array or is not there at all

[discuss](#)

300. The Average case occur in linear search algorithm

- A. When Item is somewhere in the middle of the array
- B. When Item is not in the array at all
- C. When Item is the last element in the array
- D. All the above

Answer» A. When Item is somewhere in the middle of the array

[discuss](#)

301. The complexity of the average case of an algorithm is

- A. Much more complicated to analyze than that of worst case
- B. Much more simpler to analyze than that of worst case
- C. Sometimes more complicated and some other times simpler than that of worst case
- D. None of the above

Answer» A. Much more complicated to analyze than that of worst case

[discuss](#)

302. The following data structure allows deleting data elements from front and inserting at rear

- A. Stacks
- B. Queues
- C. Deques
- D. Binary search tree

Answer» B. Queues

[discuss](#)

303. This data structure allows deletions at both ends of the list but insertion at only one end.

- A. Input-restricted deque
- B. Output-restricted deque
- C. Priority queues
- D. None of the above

Answer» A. Input-restricted deque

[discuss](#)

304. The following data structure is non-linear type

- A. Strings
- B. Lists
- C. Stacks
- D. None of the above

Answer» D. None of the above

[discuss](#)

305. The following data structure is linear type

- A. Strings
- B. Lists

Answer» D. All of the above

305. The following data structure is linear type

- C. Queues
- D. All of the above

Answer» D. All of the above

[discuss](#)

306. To represent hierarchical relationship between elements, the following data structure is not suitable

- A. Deque
- B. Priority
- C. Tree
- D. All of above

Answer» C. Tree

[discuss](#)

307. A binary tree whose every node has either zero or two children is called

- A. Complete binary tree
- B. Binary search tree
- C. Extended binary tree
- D. None of above

Answer» C. Extended binary tree

[discuss](#)

308. The depth of a complete binary tree is given by

- A. $D_n = n \log_2 n$
- B. $D_n = n \log_2 n + 1$
- C. $D_n = \log_2 n$
- D. $D_n = \log_2 n + 1$

Answer» D. $D_n = \log_2 n + 1$

[discuss](#)

309. The complexity of Binary search algorithm is

- A. $O(n)$
- B. $O(\log)$
- C. $O(n \log n)$
- D. None of the above

Answer» B. $O(\log)$

[discuss](#)

310. The complexity of Bubble sort algorithm is

- A. $O(n)$
- B. $O(n^2)$
- C. $O(n \log n)$
- D. None of the above

Answer» B. $O(n^2)$

[discuss](#)

311. When in order traversing a tree resulted E A C K F H D B G; the preorder traversal would return

- A. FAEKDCBHG
- B. FAEKCDHGB
- C. EAFKHDCBG
- D. FEAKDCHBG

Answer» B. FAEKCDHGB

[discuss](#)

312. When representing any algebraic expression E the following uses only binary operations in a 2-tree

- A. the variable in E will appear as external nodes and operations in internal nodes
- B. the operations in E will appear as external nodes and variables in internal nodes
- C. the variables and operations in E will appear only in internal nodes
- D. None of the above

Answer» A. the variable in E will appear as external nodes and operations in internal nodes

[discuss](#)

313. When converting binary tree into extended binary tree, all the original nodes in binary tree are

- A. internal nodes on extended tree
- B. external nodes on extended tree
- C. vanished on extended tree
- D. None of the above

Answer» A. internal nodes on extended tree

[discuss](#)

314. The post order traversal of a binary tree is DEBFCA. Find out the pre order traversal

- A. ABFCDE
- B. ADBFEC
- C. ABDECF

Answer» C. ABDECF

314. The post order traversal of a binary tree is DEBFCA. Find out the pre order traversal

D. None of the above

Answer» C. ABDECF

[discuss](#)

315. Which of the following data structure is linear data structure?

A. Trees

B. Graphs

C. Arrays

D. None of the above

Answer» C. Arrays

[discuss](#)

316. The operation of processing each element in the list is known as

A. Merging

B. Inserting

C. Traversal

D. All the above

Answer» C. Traversal

[discuss](#)

317. Finding the location of the element with a given value is called

A. Traversal

B. Search

C. Sort

D. All of the above

Answer» B. Search

[discuss](#)

318. Arrays are best data structures for

A. relatively permanent collections of data

B. the size of the structure and the data in the structure are constantly changing

C. both of above situation

D. none of above situation

Answer» A. relatively permanent collections of data

[discuss](#)

319. Linked lists are best suited for

- A. relatively permanent collections of data
- B. the size of the structure and the data in the structure are constantly changing
- C. both of above situation
- D. none of above situation

Answer» B. the size of the structure and the data in the structure are constantly changing

[discuss](#)

320. Each array declaration need not give, implicitly or explicitly, the information about the

- A. name of array
- B. data type of array
- C. first data from the set to be stored
- D. index set of the array

Answer» C. first data from the set to be stored

[discuss](#)

321. The complexity of merge sort algorithm is

- A. $O(n)$
- B. $O(\log n)$
- C. $O(n \log n)$
- D. None of these

Answer» C. $O(n \log n)$

[discuss](#)

322. The indirect change of the values of a variable in one module by another module is called

- A. internal change
- B. inter-module change
- C. side effect
- D. all the above

Answer» C. side effect

[discuss](#)

323. Two main measures for the efficiency of an algorithm are

- A. Time and space
- B. Processor and memory

Answer» A. Time and space

323. Two main measures for the efficiency of an algorithm are

- C. Complexity and capacity
- D. Data and space

Answer» A. Time and space

[discuss](#)

324. The time factor when determining the efficiency of algorithm is measured by

- A. Counting the number of key operations
- B. Counting the number of statements
- C. Counting the kilobytes of algorithm
- D. None of the above

Answer» A. Counting the number of key operations

[discuss](#)

325. The space factor when determining the efficiency of algorithm is measured by

- A. Counting the maximum memory needed by the algorithm
- B. Counting the minimum memory needed by the algorithm
- C. Counting the average memory needed by the algorithm
- D. Counting the maximum disk space needed by the algorithm

Answer» A. Counting the maximum memory needed by the algorithm

[discuss](#)

326. All the above* Which of the following data structures are indexed structures

- A. linear arrays
- B. linked lists
- C. both of above
- D. none of above

Answer» A. linear arrays

[discuss](#)

327. Which of the following is not the required condition for binary search algorithm

- A. there must be mechanism to delete and/ or insert elements in list
- B. the list must be sorted
- C. there should be the direct access to the middle element in any sublist
- D. none of the above

Answer» A. there must be mechanism to delete and/ or insert elements in list

[discuss](#)

328. Which of the following is not a limitation of binary search algorithm ?

- A. binary search algorithm is not efficient when the data elements are more than 1000.
- B. must use a sorted array
- C. requirement of sorted array is expensive when a lot of insertion and deletions are needed
- D. there must be a mechanism to access middle element directly

Answer» A. binary search algorithm is not efficient when the data elements are more than 1000.

[discuss](#)

329. Two dimensional arrays are also called

- A. tables arrays
- B. matrix arrays
- C. both of the above
- D. none of the above

Answer» C. both of the above

[discuss](#)

330. The term "push" and "pop" is related to the

- A. Array
- B. Lists
- C. stacks
- D. all of above

Answer» C. stacks

[discuss](#)

331. A data structure where elements can be added or removed at either end but not in the middle is referred as

- A. Linked lists
- B. Stacks
- C. Queues
- D. Deque

Answer» D. Deque

[discuss](#)

332. The following sorting algorithm is of divide- and-conquer type

- A. Bubble sort
- B. Insertion sort
- C. Quick sort
- D. None of the above

Answer» C. Quick sort

Explanation: Quick sort is a divide-and-conquer sorting algorithm that works by partitioning a list of items into two smaller lists and then sorting each of these lists recursively. It is an efficient and widely used algorithm, with an average case time complexity of $O(n \log n)$.

Bubble sort and insertion sort are both comparison-based sorting algorithms, but they do not use the divide-and-conquer approach. Bubble sort works by repeatedly swapping adjacent elements that are out of order, while insertion sort works by iteratively inserting each element into its correct position in the sorted list. Both of these algorithms have a time complexity of $O(n^2)$ in the worst case.

[discuss](#) ⁽¹⁾

333. An algorithm that calls itself directly or indirectly is known as

- A. Recursion
- B. Polish notation
- C. Traversal algorithm
- D. None of the above

Answer» A. Recursion

[discuss](#)

334. The elements of an array are stored successively in memory cells because

- A. by this way computer can keep track only the address of the first element and the addresses of other elements can be calculated
- B. the architecture of computer memory does not allow arrays to store other than serially
- C. A and B both false
- D. A and B both true

Answer» A. by this way computer can keep track only the address of the first element and the addresses of other elements can be calculated

[discuss](#)

335. The memory address of the first element of an array is called

- A. base address
- B. floor address
- C. foundation address
- D. first address

Answer» A. base address

336. The memory address of fifth element of an array can be calculated by the formula

- A. $LOC(Array[5]) = Base(Array[5]) + (5 - \text{lower bound}(D)) \times w$, where w is the number of words per memory cell for the array
- B. $LOC(Array[5]) = Base(Array[4]) + (5 - \text{Upper bound}(D)) \times w$, where w is the number of words per memory cell for the array
- C. $LOC(Array[5]) = Base(Array) + w(5 - \text{lower bound}(D))$
- D. , where w is the number of words per memory cell for the array

Answer» C. $LOC(Array[5]) = Base(Array) + w(5 - \text{lower bound}(D))$

[discuss](#)

337. The following data structure can't store the non-homogeneous data elements

- A. Arrays
- B. Records
- C. Pointers
- D. None of the above

Answer» A. Arrays

[discuss](#)

338. The in order traversal of tree will yield a sorted listing of elements of tree in

- A. Binary trees
- B. Binary search trees
- C. Heaps
- D. None of above

Answer» B. Binary search trees

[discuss](#)

339. In a Heap tree values in a node is greater than

- A. every value in left sub tree and smaller than right sub tree
- B. every value in children of it
- C. Both of above conditions are true
- D. None of above conditions are true

Answer» B. every value in children of it

[discuss](#)

340. In a graph if $e = [u, v]$, Then u and v are called

- A. endpoints of e

Answer» D. all of the above

340. In a graph if $e=[u, v]$, Then u and v are called

- B. adjacent nodes
- C. neighbors
- D. all of the above

Answer» D. all of the above

[discuss](#)

341. A connected graph T without any cycles is called

- A. tree graph
- B. free tree
- C. tree
- D. All of the above

Answer» D. All of the above

[discuss](#)

342. The difference between linear array and a record is

- A. An array is suitable for homogeneous data but the data items in a record may have different data type
- B. In a record, there may not be a natural ordering in opposed to linear array.
- C. A record form a hierarchical structure but a linear array does not
- D. All of above

Answer» D. All of above

[discuss](#)

343. The following data structure store the ho- mogeneous data elements

- A. Arrays
- B. Records
- C. Pointers
- D. None of the above

Answer» A. Arrays

[discuss](#)

344. Which of the following data structure is not linear data structure?

- A. Arrays
- B. Linked lists
- C. A and B are true
- D. None is true

Answer» C. A and B are true

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[+91 8007592194](tel:+918007592194) [+91 9284926333](tel:+919284926333)



codewitharrays@gmail.com



<https://codewitharrays.in/project>