SASKATCHEWAN COMPUTER SCIENCE 30 · UNIT A · 25 QUESTIONS

Data Structures — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **An ordered collection that can grow and shrink is called**

- A list
- B queue
- C linked list
- D tree

Understand It with Pulse | Flag a mistake

2 **A stack removes items in this order**

- A first in, first out
- B last in, first out
- C random order
- D sorted order

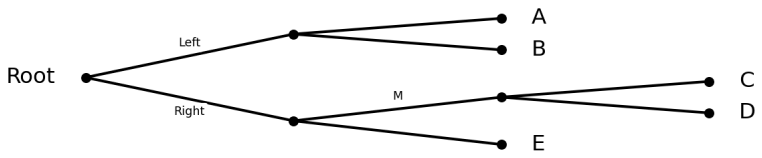
Understand It with Pulse | Flag a mistake

3 **An array holds the values [10, 13, 16, 19, 22, 25]. The value at index 2 is _____**

ANSWER

Understand It with Pulse | Flag a mistake

4 **The tree diagram shown represents a data structure. The number of leaves in the tree is**



A 3

B 4

C 5

D 6

Understand It with Pulse | Flag a mistake

5 **A collection where the last item added is the first removed is called**

A linked list

B tree

C binary tree

D stack

Understand It with Pulse | Flag a mistake

6 **A queue removes items in this order**

A first in, first out

B last in, first out

C random order

D sorted order

Understand It with Pulse | Flag a mistake

7 **An array holds the values [10, 13, 16, 19, 22]. The value at index 3 is _____**

ANSWER

Understand It with Pulse | Flag a mistake

8 **The tree shown has this many nodes in total**

A 4

B 7

C 5

D 6

Understand It with Pulse | Flag a mistake

9 **A collection where the first item added is the first removed is called**

- A tree
- B binary tree
- C queue
- D node

Understand It with Pulse | Flag a mistake

10 **In a binary tree, each node has at most**

- A one child
- B three children
- C no children
- D two children

Understand It with Pulse | Flag a mistake

11 **An array holds the values [10, 13, 16, 19, 22, 25, 28]. The value at index 4 is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A collection where each item links to the next item is called**

A linked list

B binary tree

C node

D array

Understand It with Pulse | Flag a mistake

13 **A hash table is useful mainly for**

A slow sorting

B fast lookup

C storing one value

D printing only

Understand It with Pulse | Flag a mistake

14 **In a list of four scores, the third score is found at index**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A branching structure with a root and leaves is called**

A node

B array

C tree

D hash table

Understand It with Pulse | Flag a mistake

16 **A linked list differs from an array because its items are**

A always sorted

B fixed in number

C only numbers

D linked, not stored side by side

Understand It with Pulse | Flag a mistake

17 **A stack is a data structure where the first item removed is the**

- A first item added
- B last item added
- C middle item
- D largest item

Understand It with Pulse | Flag a mistake

18 **A tree where each node has at most two children is called**

- A binary tree
- B array
- C hash table
- D record

Understand It with Pulse | Flag a mistake

19 **The root of a tree is its**

A leaf node

B top node

C last node

D smallest node

Understand It with Pulse | Flag a mistake

20 **People join a line at a ticket booth in this order: Ana, Ben, Cid. Who is served first?**

A Ana

B Cid

C Ben

D Nobody is served

Understand It with Pulse | Flag a mistake

21 **One item in a linked structure or tree is called**

A hash table

B record

C node

D list

Understand It with Pulse | Flag a mistake

22 **A record that stores a student name, grade and age together is best called a**

A single variable

B array of numbers

C data structure or record

D loop

Understand It with Pulse | Flag a mistake

23 **A fixed size ordered collection of values is called**

- A record
- B list
- C stack
- D array

Understand It with Pulse | Flag a mistake

24 **Searching a sorted list by repeatedly halving it is called**

- A a linear search
- B a binary search
- C sorting
- D indexing

Understand It with Pulse | Flag a mistake

25 **A structure that finds values quickly using a hash function is called**

A hash table

B list

C stack

D queue

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. A
2. B
3. 16
4. C
5. D
6. A
7. 19
8. B
9. C
10. D
11. 22
12. A
13. B
14. 2
15. C
16. D
17. B
18. A
19. B
20. A
21. C
22. C
23. D
24. B
25. A

© 2026 Brett Robbins. All Rights Reserved.