Test 4 set D level 1 programming

If a variable has type char, then the pointer variable must have type pointer to char that is denoted as

&char

!c]har

char %

char*

The address of a variable is accessed by

Pointer

An array

Address operator

Function

The address operator is denoted by

*

$

#

&

In situations where we need to execute the body of the loop before testing the condition, we should use

For loop

while loop

do-while loop

nested for loop

Which of the following is a correct way to declare a pointer?

int •ptr;

int* ptr;

int &ptr;

Both A and B

Which of the following is the correct way to declare a pointer ?

int *ptr

int ptr

int &ptr

All of the above

Which of the following gives the [value] stored at the address pointed to by the pointer :

Value(ptr)

ptr

&ptr

•ptr

what is the effect of writing a break statement inside a loop?

It cancels remaining iterations

It skips a particular iteration

The program terminates immediately

Loop counter is reset

If an argument from the parameter list of a function is defined constant then

It can be modified inside the function

It can be modified inside the function

Error occurs

Segmentation fault

Choose the correct output:

#include<stdio-h>

int main()

inti = 3;

int •j;

int *'k;

printf("%d " '*k)-

return 0;

Garbage value

Compilation Error

Run time error

Linker Error

What is the effect of writing a break statement inside a loop?

It cancels remaining iterations.

It skips a particular iteration.

The program terminates immediately.

Loop counter is reset.

In which direction will the assignment operation take place?

left to right

right to left

top to bottom

bottom to top

The address operator has a precedence level equal to

Not operator

pre-increment operator

Logical

Both A and B

The address of a variable is accessed by

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Function

What header file is used to perform string operations in C++?

string

character

stringarray

stringclass

In situations where we need to execute the body of the loop before testing the condition, we should use

For loop

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nested for loop

What does the following function do?

void fun I(stmct node* head)

if (head nullptr)

fun 1 (head->next),

cout << head->data;

Prints all nodes of linked lists

Prints all nodes of the linked list in reverse order

Prints alternate nodes of Linked List

Prints alternate nodes in reverse order

How many types of loops are there in C++?

4

2

3

1

What is a static function in C++?

A function that can be called without creating an object

A function that retains its values between calls

A function that cannot be changed

A member function that is called automatically

What is encapsulation in C++?

The process of combining data and functions into a single unit called class

The ability of an object to take many forms

The process of inheriting properties from another class

A method of data manipulation

In the context of backtracking, what does the term "pruning" refer to?

Reducing the size of the search space

Discarding unpromising partial solutions

Trimming the depth of the recursion

Selecting the most promising choice

If a problem can be broken into subproblems which are reused several times, the problem possesses

property?

Overlapping subproblems

Optimal substructure

Memoization

Greedy

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Consider the following dynamic programming implementation of the Knapsack problem?

```
#include<stdio.h>
int find_max(int a, int b)
```

```
if(a > b)
return a;
return b;
int knapsack(int W, int M, int n)
int ans[n + + 11;
int itm,w;
for(itm = O; itm n; itm++)
for (w O; w W;
for Otm 1 ; itm n,
for(w = 1; w <= W; w++)
- 11 w)
ans[itm][wl =
else
= ans[itm -
return
int main()
{
int = = {60, 100, 120}, W = 50
int ans = knapsack(W, w, v, 3);
printf("%d",ans);
return 0;
}
```

Which of the following lines completes the above code?

find_max(ans[itm — l][w — wt[itm — 11] + val[itm — 1], ans[itm — l][w])

find_max(ans[itm — l][w — wt[itm — 11], ans[itm — l][w])

ans[itm][w] = ans[itm — l][w];

ans[itm+l][w] = ans[itm — l][w];

A node is said to be

if it has a possibility of reaching a complete solution.

Non-promising

Promising

Succeeding

Preceding

The main time taking step in fractional knapsack problem is

Breaking items into fraction

Adding items into knapsack

Sorting

Looping through sorted items

A hash table of length 10 uses open addressing with hash function h(k)=k mod 10, and linear probing. After inserting 6 values into an empty hash table, the table is as shown below.

10

20

30

40

Which of the following is a correct difference between singly and doubly linked lists?

Singly linked lists can only be traversed in one direction, while doubly linked lists can be traversed in both directions.

Singly linked lists have a head node, but no tail node, while doubly linked lists have both a head and tail node.

Singly linked lists are more efficient than doubly linked lists.

Singly linked lists are more difficult to implement than doubly linked lists.

Which of the following is not a property of a queue?

First-in, first-out (FIFO)

Elements are inserted at the rear of the queue

Elements are deleted from the front of the queue

The queue can be implemented using a linked list

Which of the following algorithms is used to perform string matching using a probabilistic model?

Knuth-Morris-Pratt (KMP) algorithm

Rabin-Karp algorithm

Boyer-Moore algorithm

Z algorithm

Given an empty AVL tree, how would you construct AVL tree when a set of numbers are given without performing any rotations?

just build the tree with the given input

find the median of the set of elements given, make it as root and construct the tree

use trial and error

use dynamic programming to build the tree