

2021

**COMPUTER PROGRAMMING WITH C/C++**

*Full Marks: 60*

Time: Two hours

*The figures in the margin indicate full marks for the questions.*

A. Multiple Choice Questions

1 x 20=20

1. Which of the following are considered as Tokens in C?

- I) *Keyword, operators, punctuators*
- II) *Constants, Identifiers (or variables)*
- III) *Whitespaces, comments*
- a. I and II
- b. I and III
- c. II and III
- d. All of the above

2. Identify the following syntax:

```
if(condition1)
{
// statement(s);
}

else if(condition2)
{
//statement(s);
}
...
...
...
else if (conditionN)

{
//statement(s);
}

else
```

```
{  
//statement(s);  
}
```

- a. If-else statement
  - b. Nested if-else statement
  - c. If-else ladder statement
  - d. Switch statement
3. Identify the incorrect statement in the following:
- a. Semicolons are provided to terminate the statement in C programs.
  - b. A comment is a simple text that makes your code more descriptive and readable.
  - c. A C program consists of one or more Main Function(s).
  - d. stdio.h stands for standard input and output.
4. Consider the following program:

```
#include<stdio.h>  
int main() {  
    printf("BASIC CALCULATOR IN C\n\n");  
    int n1 = 10, n2 = 20;  
    char operation = '+';  
    switch (operation) {  
        case '+':  
            printf( "%d\n", n1 + n2 );  
            break;  
  
        case '-':  
            printf( "%d\n", n1 - n2);  
            break;  
  
        case '*':  
            printf( "%d\n", n1 * n2);  
            break;  
  
        case '/':  
            printf( "%d\n", n1/n2 );  
            break;  
  
        default:  
            printf( "Invalid choice\n");  
            break;  
    }  
    return 0;  
}
```

- Which is the correct output for the above program?
- 10
  - 200
  - 2
  - 30
5. Which of the following is not a secondary (derived) data-type in C?
- Float
  - Pointer
  - Array
  - Function
6. Which of the following is not a user-defined data type in C?
- Union
  - Enumeration
  - Int
  - Structures
7. Which of the following Format specifiers (placeholders) do not match the given statement?
- %d for integer values
  - %f for decimal values
  - %n for a line
  - %s for strings
8. Which of the following is false?
- Function in C is a group of statements written to perform a specific task.
  - C Pointers are variables used to store the memory address of another variable.
  - Both (a) and (b)
  - Neither (a) nor (b)
9. Which of the following is not a jump statement?
- Continue
  - Switch
  - Break
  - Goto

10. Which of the following statement is true?
  - a. C is a case sensitive language.
  - b. Whitespaces should be provided between variables and keywords.
  - c. Both (a) and (b)
  - d. Neither (a) nor (b)
11. Which of the following is equal to a gigabyte?
  - a. 1024 bytes
  - b. 512 GB
  - c. 1024 bits
  - d. 1024 MB
12. DOS stands for
  - a. Disk Operating System
  - b. Disk Operating Session
  - c. Digital Operating System
  - d. Digital Open System
13. Which of the following statement does not support iteration in C programming?
  - a. Do-while
  - b. For
  - c. If-else
  - d. While
14. In C programming, which method is used to call a function?
  - a. Pass by value
  - b. Pass by reference
  - c. Neither (a) nor (b)
  - d. Both (a) and (b)
15. Which of the following is true?
  - a. One-dimensional array – Vectors
  - b. Two-dimensional array – Matrix
  - c. Three-dimensional array – An array of arrays
  - d. All of the above

16. Which of the following is not included in a preprocessor command?
  - a. # hash symbol
  - b. ; semicolon
  - c. pre-processor commands such as include, ifndef, define
  - d. a header file
17. C++ is an object oriented programming language.
  - a. True
  - b. False
18. Inheritance is one of the characteristics of an object oriented programming language.
  - a. True
  - b. False
19. UNIX is
  - a. An operating system
  - b. A language
  - c. An application
  - d. None of the above
20. File are stored in
  - a. Primary memory
  - b. Secondary memory
  - c. None of the above

B. Very Short Question

2\*6=12

1. Write the job of a compiler.
2. How comments are given in a program written using C/C++?
3. Name four operators used in C/C++.
4. What do you mean by keywords used in C/C++? List any four keywords.
5. What are the different types of variables in C/C++?
6. Write the difference between while and do-while loop.

C Short Question

4\*7=28

1. Show the different types of Variable Declaration-Initialization in C programming.

2. Write the output of the following C program:

```
#include <stdio.h>

int main() {
    int i;
    for (i=1; i <=10; i++)
        printf("%d\n", i+1);
    return 0;
}
```

3. Write a C program to find the factorial of a given number.
4. Write a C program to display even numbers between 1 and 50.
5. Write a C program to display 10 Fibonacci numbers.
6. Write a C program to compare three numbers a, b, and c.
7. Write short notes on the following (any two)
- i) operating system
  - ii) object oriented programming
  - iii) control statements in C/C++

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