

Total No. of printed pages = 8

19/5th Sem/UCSE509

2021

INTRODUCTION TO PROGRAMMING

Full Marks – 100

Time – Three hours

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

Answer any *five* questions.

1. Multiple choice questions : $1 \times 20 = 20$

(i) Which of the following is not a valid variable in C ?

- (a) var123 (b) CIT
(c) 123_student (d) None of these

(ii) How many keywords are there in C programming ?

- (a) 30 (b) 31
(c) 32 (d) None of these

[Turn over

(iii) What is the output of the following C program ?

```
1. #include <stdio.h>
2. int main()
3. {
4.     int x = 2, y = 3;
5.     x *= y;
6.     printf("%d\n", x);
7.     return 0;
8. }
```

- (a) 2 (b) 5
(c) 6 (d) None of these

(iv) What will be the output of the following C code ?

```
1. #include <stdio.h>
2. void main()
3. {
4.     int x = 0;
5.     if (x == 0)
6.         printf("hi");
7.     else
```



8. `printf("how are u");`
9. `printf("hello");`
10. `}`

- (a) how are u (b) Hello
(c) Hihello (d) Hi

(v) A recursive call of a function means

- (a) Function calls another function
(b) Function is not called
(c) Function calls itself
(d) None of these

(vi) Convert $(1024)_{10}$ to its binary equivalent.

- (a) 011000000000 (b) 010000011111
(c) 010000000000 (d) 011111111111

(vii) Which of the following is not an assignment expression ?

- (a) `y = z * 5;` (b) `x + = 1;`
(c) `(a = = b)` (d) None of these



(viii) C programs are converted into machine language with the help of

- (a) An Editor
- (b) An Operating System
- (c) A Compiler
- (d) None of these



(ix) What is the extension files by default for C program ?

- (a) .doc
- (b) .exe
- (c) .c
- (d) .ppt

(x) Which of the following is not a relational operator ?

- (a) <=
- (b) !=
- (c) =
- (d) ==

(xi) i++ is called _____ operator.

- (a) Post decrement
- (b) Pre increment
- (c) Post increment
- (d) Pre decrement

(xii) Which of the following is not an example of Looping statement ?

- (a) For
- (b) Do while
- (c) Switch
- (d) While

(xiii) Which is syntax of for loop ?

- (a) for (increment; expression; condition)
- (b) for (condition; expression; statement)
- (c) for (initialization; condition; increment/
decrement)
- (d) None of these

(xiv) ASCII value of 'A' is :

- (a) 68
- (b) 97
- (c) 65
- (d) 100

(xv) Find out the output for the following program

```
main()
{
do
printf("I am in loop");
while(4<3);
}
```

- (a) 4<3
- (b) Compilation error
- (c) I am in loop
- (d) None of these





(xvi) Full form of ROM

- (a) Random Only Memory
- (b) Reader One Memory
- (c) Read Only Memory
- (d) None of these

(xvii) The structure combines variables of _____ data type.

- (a) Integer
- (b) Similar
- (c) Dissimilar
- (d) None of these

(xviii) How many of bytes in memory required for single character in computer ?

- (a) 8 bytes
- (b) 2 bytes
- (c) 1 bytes
- (d) 16 bytes

(xix) If 'a' is an interger variable, then $a = 5/2$; will return a value

- (a) 2.5
- (b) 3
- (c) 2
- (d) 0

(xx) By default a function returns a value of type

- (a) Float
- (b) Int
- (c) Void
- (d) None of these.

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2. (i) What is the difference between while and do while loop ? 5
- (ii) What is the difference between Array and Structure ? 5
- (iii) What is the difference between function call by value and call by reference ? Explain with suitable example. 5+5=10
3. (i) Write an algorithm to check whether a number is odd or even. Also write the C program for that algorithm. 5+5=10
- (ii) Write a C program to check whether an alphabet is vowel or consonant using switch case. 10
4. (i) What is a pointer in C ? Explain how to initialize a pointer with an example. 10
- (ii) Write a program in C to swap the values of two numbers using functions call by reference concept. 10
5. (i) Draw the block diagram of a digital computer and explain each component in brief. 10
- (ii) Explain the different types of loops in C with syntax. 10

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6. (i) Discuss various types of operators used in C. 10
(ii) Write a program to take 5 integer values from the user and store them in an array. 10
7. Write short note on any *four* : 4×5=20
- (i) RAM and ROM
 - (ii) ARRAY
 - (iii) STRUCTURE
 - (iv) FUNCTION
 - (v) BREAK and CONTINUE.

