SARDAR PATEL UNIVERSITY

Master of Computer Applications – Semester I Examination
PS01CMCA21 – Computer Programming and Problem Solving
9th April 2019, Tuesday

Time: 10.00 am to 1.00 pm   **Total Marks: 70**

Q1.   Select the appropriate answer of the following questions: **[8]**

1.   Which of the following is a ternary operator?

   [A] +   [B] &&
   [C] ? :   [D] >

2.   Which of the following operators takes only integer operands?

   [A] +   [B] *
   [C] /   [D] %

3.   _____ is an exit control loop.

   [A] do...while   [B] if..else
   [C] while   [D] switch

4.   The expression 4 + 6 / 3 * 2 - 2 + 7 % 3 evaluates to

   [A] 3   [B] 4
   [C] 6   [D] 7

5.   If c is a variable initialized by 1, how many times will the following loop be executed?

```
while ((c>0) && (c<10))
{
  c++;
}
```

   [A] 1   [B] 9
   [C] 10   [D] infinite

6.   printf() function is available in _____ header file

   [A] stdio.h   [B] string.h
   [C] math.h   [D] conio.h

7.   The variable which can be accessed by all modules in a program, is called

   [A] local variable   [B] external variable
   [C] internal variable   [D] global variable

8.   Which of the following is not a basic data type in C?

   [A] int   [B] float
   [C] char   [D] string

Q2.   Answer the following questions: [Any seven]   **[14]**

1.   List various basic data types with their memory usage supported by C language.

2.   State whether the following statements are valid or invalid:
   i.   printf("%d %c",97,97);
   ii.   while (0) { printf("COMPUTER"); }

3.   Discuss the rules for naming the variable.

(P.T.O.)

4. Explain #include with example.

5. What is the difference between ++a and a++?

6. What is the difference between actual and formal parameters?

7. What is a syntax error? Give any suitable example.

8. What is recursion? Give any simple example.

9. What are the different types of programming languages?

Q3 A Explain various symbols used to draw a flowchart. Draw a flowchart to accept the value of n and generate & display the sum of first n terms of Fibonacci series as: 1 1 2 3 5 8 ...... **[6]**

Q3 B List the categories of operators and explain any one of the category with examples. **[6]**

OR

Q3 B Explain printf() and scanf() functions with examples. **[6]**

Q4 A Explain switch statement with example. How does it differ from if-else statement? **[6]**

Q4 B List out the looping structures available in C. Explain any one of them in detail. **[6]**

OR

Q4 B Write a note on user defined function. Also write appropriate example. **[6]**

Q5 A What is a structure? How does a structure differ from an array? Discuss the declaration of structure and use of it in program with example. **[6]**

Q5 B What is a string? Explain how can we define and initialize a string. Discuss any one string built-in function. **[6]**

OR

Q5 B Write a program to accept an array of n integer numbers from the user and display these numbers in sorted order. **[6]**

Q6 A Write significance of file in C. Explain defining and opening of a file. **[6]**

Q6 B Write a note on pointer. **[6]**

OR

Q6 B Write notes on, in brief: **[6]**
   (i)   command line argument
   (ii) union

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(2)