SARDAR PATEL UNIVERSITY
M.Sc. Information Technology (Integrated) Examination
1st Semester (CBCS)
Thursday, Date: 6th December, 2012
Session: Morning   Time : 10:30 A.M. to 1:30 P.M.

Course Code: PS01CIIT03

Course Title : Problem Solving Methodology and Programming in 'C'.

Total Marks: 70

Q1.   Multiple Choice Questions   [10]

1. _____is a pictorial representation of an algorithm.

    a. Data Diagram   b. Flowchart

    c. Pie Chart   d. Program

2. Mnemonic a memory trick is used in which of the following language?

    a. Machine Language   b. Assembly Language

    c. High Level Language   d. None of the Above

3. Which of the following character constant is used for printing horizontal tab?

    a. \n   b. \t

    c. \b   d. \y

4. _____ format specifier is used for integer data type.

    a. %d   b. %c

    c. %f   d. % i

5.
```
while (1)
{
        printf("Examination");
}
```
How many times above loop will be executed?

    a. 1   b. 5

    c. infinite time   d. finite time

6. _____loop body is executed at least once even if test-condition is evaluated to false.

    a. while   b. do...while

    c. if   d. for

7. When we declare an array _____data type is used.

    a. int   b. char

    c. float   d. all of the above

8. The _____string function is used to join two strings.

    a. strcat   b. strcpy

    c. strrrev   d. strcmp

9. Ampersand (&) is not required to read the _____value.

    a. integer   b. character

    c. string   d. float

10. printf ( ) and scanf ( ) are _____ type of functions.

    a. library   b. user-defined

    c. main   d. none of the above

Q2. Answer the following short questions (Attempt any TEN) **[20]**

1. Write advantages and disadvantages of an algorithm.
2. Draw flowchart to calculate simple interest.
3. What is Translator? List all translators.
4. State rules for defining a variable in 'c' programming language.
5. Draw basic structure of a 'c' program.
6. Explain conditional operator in brief.
7. Write difference between exit and entry controlled loop.
8. What is array? List out the types of array used in 'c' programming.
9. Write the syntax of run time initialization of 2D array in 'c'. Also give example.
10. State the purpose, syntax and example of strcmp ( ) function.
11. Define function? List out the categories of user defined functions.
12. Explain strrev ( ) function with syntax and example.

Q3. What is Flowchart? State rules to draw flowchart. State advantages of **[10]** flowchart and draw and explain symbols used to draw a flowchart.

OR

Q3. Explain the Machine Level Language and Assembly Language. Also state **[10]** advantages and disadvantages of both languages.

Q4.a. Explain the following operators used in 'c' programming language **[6]**
  1. Relational   2. Arithmetic   3. Logical
  b. Explain if... else statement in detail with example. **[4]**

OR

Q4.a. Explain printf( ) and scanf( ) function with its general form and example. **[6]**
  b. Explain switch statement in detail with example. **[4]**

Q5.a. Explain the following library function with syntax and example **[6]**
  1. pow( )   2. isaplha( )   3. isdigit( )
  b. Explain while loop with its general form and example. **[4]**

OR

Q5.a. Explain the declaration and initialization of 1D array with syntax and example. **[6]**
  b. Explain for loop with its general form and example. **[4]**

Q6. a. Explain the function category with argument and no return value with example. **[6]**
  b. Explain gets() and puts() function with its purpose , syntax and example **[4]**

OR

Q6. a. Explain the function category with argument and return value with example. **[6]**
  b. Write a note on Command Line Argument **[4]**

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