Reg. No. | | | | | | | | | |

BCMCAV 105

Credit Based First Semester B.Com. Degree Examination, Nov./Dec. 2015
(Common to All Batches)
Subject : COMPUTER APPLICATIONS
Paper – II : Programming in 'C'

Time : 3 Hours | Max. Marks : 80

***Note** : Answer **any ten** questions from Part – **A** and **any one full** question from each Unit of Part – **B**.*

PART – A **(2×10=20)**

1. a) Give basic structure of a C program.

   b) Specify the process of execution of a C program.

   c) How do you input an integer in C ? Give an example.

   d) Correct the errors : //define PI = 3.14.

   e) Mention any 4 relational operators in C.

   f) Give the syntax and example for a conditional expression.

   g) What is initialization ? How do you initialize value of an integer variable as 40 ?

   h) Why break statement is used in C ?

   i) What do you mean by a comment statement ? How do you comment a statement in C ?

   j) Give syntax and example of structure declaration.

   k) How do you declare a 2 dimensional array in C ? Give an example.

   l) Name any 4 mathematical functions.

P.T.O.

PART – B

Unit – I

2. a) Determine the value of each of the following expressions :

   i) X = (a < b) ? b : a + 3 * b;

   ii) Z = c % b;

   iii) y = a++ + b++;

   (assume int X, Y, a = 16, b = 6 and c = 2)

   b) List fundamental data types in 'C'. Explain any two types in detail.

   c) Explain different logical operators in 'C' with example. **(3+6+6)**

3. a) Explain the following tokens used in C.

   i) Keyword

   ii) Constant.

   b) Name bitwise operators available in C. Explain any two bitwise operators with syntax and example.

   c) Explain features of C language. **(4+5+6)**

Unit – II

4. a) Differentiate while loop and do.. while loop with syntax and example.

   b) Write a 'C' program to find maximum number in a given list 'N' numbers.

   c) Write a 'C' program to transpose a matrix. **(4+5+6)**

5. a) Explain the if..else..if ladder along with its syntax and example.

   b) Write a 'C' program to reverse a given number.

   c) Explain switch statement with its syntax and example. **(6+4+5)**

Unit – III

6. a) Explain the following functions with syntax, usage and example :

   i) strcpy( )

   ii) strlen( )

   iii) strcmp( )

b) Write a function module to find factorial of a number. Use this function to find factorial of a given number.

c) What are external and automatic variables ? Explain with example. **(6+5+4)**

7. a) Write a 'C' program to count number of digits and spaces in a string.

b) Explain recursion with suitable example.

c) Explain any five character handling functions with example. **(5+5+5)**

Unit – IV

8. a) Define a structure 'STUDENT' to contain student number, name and total mark. Write a 'C' program to accept 'N' students' information and then find the grade depending on total mark and display all information in a neat format.

b) What would be the output of the following :

```
int x = 12, *ptr;
ptr = &x;
printf("%d\n",*ptr);
printf("%d\n",*ptr - 5);
printf("%d\n",x);
```

c) Explain 3 different modes of opening a file in 'C'. **(6+3+6)**

9. a) Write a brief note on pointers.

b) Explain :

i) UNION

ii) Array of structure.

c) Explain the following functions in 'C' with syntax.

i) getc( )

ii) putc( )

iii) fscanf( ) **(5+4+6)**