Reg. No. ☐☐☐☐☐☐☐☐

BCACAC 109

Credit Based First Semester B.C.A. Degree Examination, October/November 2017
(Common to all Batches)
PROGRAMMING IN C

Time : 3 Hours

Max. Marks : 80

Note : Answer **any 10** questions from Part – **A** and **any one full** question from **each** Unit of Part – **B**.

PART – A
(10×2=20)

1. a) Differentiate constants and variables.
   b) Evaluate x = --c/2 + b * 8 /b – b + a++/3, when a = 4, b = 3, c = 25.
   c) What is explicit type conversion ? Give example.
   d) Differentiate break and continue statements with respect to looping.
   e) How does ternary operator works ? Give example.
   f) What is an array ? How do you declare one dimensional array ?
   g) What is recursion ?
   h) Write any two advantages of using user defined functions.
   i) What do you mean by scope and lifetime of a variable ?
   j) What is bit field ? How do you define it ?
   k) What is the purpose of using command line arguments ? Give example.
   l) How do you open a file ? What are the various modes of opening a file ?

PART – B

Unit – I

2. a) Explain various relational and logical operators with examples.
   b) Explain basic structure of a typical C program.
   c) Give the syntax, purpose and example for the following mathematical functions :

   i) ceil() ii) sqrt()

   iii) floor() iv) pow() (6+5+4)

3. a) What is the purpose of printf() ? Explain with syntax and examples.
   b) Explain various basic data types supported in C.
   c) Explain various arithmetic and assignment operators with example. **(4+5+6)**

Unit – II

4. a) Explain the difference between *do...while* and *while* statements.
   b) Explain various forms of it statement with syntax and example.
   c) Write C code to input and output the elements to an array of size 10. **(5+6+4)**

5. a) Explain switch statement with syntax and example.
   b) Write a program to sort the elements in a list of integers using bubble sort technique.
   c) Explain for loop with syntax and examples.

   (5+5+5)

Unit – III

6. a) Explain any three string functions with syntax and example.
   b) What is user defined function ? How do you create, define and call a function in a program ? Explain with example.
   c) Explain the purpose of storage classes static and extern. Give examples. **(6+5+4)**

7. a) Explain any three categories of user defined functions.
   b) What do you mean by call by value and call by reference ? Explain.
   c) Write three advantages of dividing program into sub functions. **(6+5+4)**

Unit – IV

8. a) What is union ? How it differs from structure ? Explain with example.
   b) Write the general format of fopen( ). Explain the different file opening modes.
   c) What is meant by preprocessors ? Explain various ways of using macro substitution directives.

   (4+5+6)

9. a) Explain structure within structure with example.
   b) What is a pointer ? How do you declare and initialize pointer variables ?
   c) Compare :

   (4+5+6)

      i) getc() and getw()

      ii) fscanf() and fprintf()

      iii) putc() and putchar().

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