**Code : 303204**

**BCA 2nd Semester Exam., 2014**

PROBLEM SOLVING TECHNIQUE AND PROGRAMMING IN C

Time : 3 hours               Full·Marks : 60

*Instructions :*

*(i)* **All** *questions carry equal marks.*

*(ii) There are* **SEVEN** *questions in this paper.*

*(iii) Attempt* **FIVE** *questions in all.*

*(iv) Question Nos.* **1** *and* **2** *are compulsory.*

1. Select the appropriate option from the multiple choices given below (any *six*) : akubihar.com

   (a) The C language has been developed by

   (i) Patrick Nughton

   (ii) Dennis Ritche

   (iii) Ken Thompson

   (iv) Martin Richards

   (b) The C programs are converted into machine language using

   (i) an assembler

   (ii) a compiler

   (iii) an interpreter

   (iv) an operating system

(c) The declaration of C variable can be done

   (i) anywhere in the program

   (ii) in declaration part

   (iii) in executable part

   (iv) at the end of program

(d) The range of character data type is

   (i) −128 to 127

   (ii) 0 to 255

   (iii) 0 to 32767

   (iv) −32767 to 32767

(e) What is the remainder of 8% 10?

   (i) 8

   (ii) 2

   (iii) 1

   (iv) 0

(f) What is the ASCII range for A to Z letters?

   (i) 65 to 90

   (ii) 48 to 57

   (iii) 97 to 122

   (iv) None of the above

(g) Each case statement in switch( ) is separated by

   (i) break

   (ii) continue

   (iii) exit( )

   (iv) goto

*(h)* A character array always ends with

    *(i)* null character

    *(ii)* question mark

    *(iii)* full stop

    *(iv)* ampersand symbol

*(i)* Recursion is a process in which a function calls

    *(i)* itself

    *(ii)* another function

    *(iii)* main( ) function

    *(iv)* None of the above

*(j)* The member variable of structure is accessed by using

    *(i)* dot operator

    *(ii)* arrow operator

    *(iii)* asterisk operator

    *(iv)* ampersand operator

**2.** Answer any *three* of the following questions :

*(a)* What are pointers? Why are they important?

*(b)* What is recursion? Explain its advantages.

*(c)* Distinguish between Break and Continue.

*(d)* What are the uses of strcpy( ) and strcmp( ) functions?

*(e)* What are the relational operators?

**3.** Write a program to enter a four-digit number. Display the digits of the number in reverse order.

**4.** Write a program to find the smallest number in an array of 10 elements.

**5.** Write a program to find length of a given string using pointer.

**6.** Write a program to check whether a given number is Armstrong or not.

**7.** Write a program to print table of a given number.