(C & T)

Voc(H-2) — BCA (8)

2017

Time : 3 hours

Full Marks : 60

Pass Marks : 27

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from **all** the Sections as directed.

SECTION – A

Answer **all** questions.

1. Fill in the blanks :   1×12 = 12

    (a) _____ operator returns the number of bytes occupied by the operand.

    (b) In _____ method, address of the variable is passed by the calling function to the called function.

WQ – 27/3   (Turn over)

(c) Besides putchar (), _____ function can be used to print a line of text on the screen.

(d) The size of memory allocated for a variable depends on its _____.

(e) A structure is declared using the keyword struct followed by a _____.

(f) Memory for a structure is allocated at the time of _____.

(g) A function defined inside the class is treated as an _____ function.

(h) In protected inheritance, protected members of the base class become _____ members of the derived class.

(i) Object slicing can be resolved using _____.

(j) The _____ statement is used to transfer control to a specified label.

(k) _____ causes the cursor to move to the next line.

(l) The elements of an array are stored in _____ memory locations.

2. State whether the following statements are 'True' or 'False' : 1×6 = 6

   (a) By default the first subscript of the array is ~~zero.~~ zero

   (b) * ptr++ will add 1 to the value pointed by ptr.

   (c) Declaring an enumerated type automatically creates a variable.

   (d) There can be only one default-case in the switch case statement.

   (e) The closing brace of main() is the logical end of the program.

   (f) Copy constructor allocates memory for data members dynamically.

3. Answer multiple choice questions of the following : 1×6 = 6

   (a) Choose the operator which can be overloaded :

   (i) ::

   (ii) . (dot)

   (iii) . *

   (iv) None of these

(b) Templates are-processed by _____.

(i) Loader

(ii) Linker

(iii) Compiler

(iv) Assembler

(c) Case labels must end with which token ?

(i) ,

(ii) :

(iii) ;

(iv) /

(d) A static member function can access only

_____.

(i) Private data members

(ii) Public data members

(iii) Static data members

(iv) Other static member function

(e) Constructor and destructor are automatically involved by _____.

(i) Operating system

(ii) Compiler

(iii) Main

(iv) Object

(f) Strcat () is defined in which header file ?

(i) ctype.h

(ii) stdio.h

(iii) string.h

(iv) math.h

SECTION – B

4. Answer any **four** questions of the following :

$$3×4 = 12$$

(a) Write a program in C++ to print the fibonacci series using recursion.

(b) What is polymorphism ? Explain how it can be achieved with suitable example.

(c) Write short notes on the following :

(i) Data Abstraction

(ii) Copy constructor

WQ – 27/3 (5) (Turn over)

(d) What do you mean by friend function in C++ ? Explain along with a suitable example.

(e) Write a program in C++ to print the factorial of a given number using a class and object.

(f) Differentiate between call-by value and call-by-reference.

SECTION – C

5. Answer any **four** questions of the following :

$$6 \times 4 = 24$$

(a) Differentiate between Private and Public members of the class using suitable examples ? Also explain and five characteristis of OOP.

(b) Write a menu driven program in C++ to calculate the area of a circle, a Square sequence and a rectangle, using function overloading.

(c) What do you mean by getline function in C++ ? Explain its limitation along with suitable example.

(d) Write a program in C++ to copy a given string into a new string. Memory of the new string must be allocated dynamically.

(e) Write short notes on the following :

    (i)   Operator overloading

    (ii) Data-Hiding and Data Security

    (iii) Inheritance

(f) Explain the iterative statements that C++ language supports using suitable example.

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