Sixth Semester B.E. Degree Examination, Dec.2016/Jan.2017
Programming in C++

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting*
atleast TWO questions from each part.

PART – A

1   a.   Briefly discuss about preprocessor directives.   **(08 Marks)**
    b.   Describe any two features of OOPS.   **(06 Marks)**
    c.   Distinguish between :
         i)   Static and dynamic memory allocation
         ii) Pointers and reference.   **(06 Marks)**

2   a.   Describe the different operations defined in C++ string class.   **(06 Marks)**
    b.   What is a constant qualifier and what are the restriction associated with it?   **(06 Marks)**
    c.   Identify the mistakes if any and correct them :
         i) int staff_size = 40 ;
             int sal[staff_size];
         ii) int main( )
             {
               float fval;
               int ival;
               double P1;
               P1 = fval = ival = 0;
               return 0;
             }
         iii) # if(max > 100)
             num = 100 ;
             #elseif(max < 100)
              num = 1000;
             #else
              num = 10 ;
             #endif
         iv) /* this is an outer comment x = 2/y;
             /* this is an inner comment x = x + 2j */ */   **(08 Marks)**

3   a.   Explain conditional operator and write a C++ program to find the largest of three numbers
         using conditional operator.   **(07 Marks)**
    b.   Describe any two looping structures in C++.   **(06 Marks)**
    c.   Write a program to find the location of an element in the array using if statement. **(07 Marks)**

4   a.   Write a program to swap two numbers using function, and print the original and swapped
         values in the main.   **(07 Marks)**
    b.   What is recursive function? Write a program to calculate the factorial of a number using
         recursive function.   **(07 Marks)**
    c.   Explain inline function and write the rules for inline function.   **(06 Marks)**

PART – B

5 a. Explain the concept of exception handling with syntax and example.   (10 Marks)
   b. Write short notes on :
      i) Rethrow
      ii) catch-all handler.   (10 Marks)

6 a. Describe class and objects. Explain different access specifiers with an example.   (10 Marks)
   b. Explain the friend function. Write a program to find the sum of two numbers using a friend function.   (10 Marks)

7 a. Describe operator overloading, with general syntax describe the process of operator overloading.   (10 Marks)
   b. Write a C++ program to overload ++ and – – operators.   (10 Marks)

8 a. What is inheritance? Explain public, private and protected means of inheritance with an example.   (10 Marks)
   b. Describe the concept of virtual inheritance with an example.   (10 Marks)

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