2011

Time: 3 hours

Full Marks: 80

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 both the Groups as directed.

Group – A
(Objective Type Questions)

Answer all questions.

1. Choose the correct answer of the following:

\[ 2 \times 10 = 20 \]

(a) The streams is a:

(i) Flow of data

(ii) Flow of integer

JX – 22/5 (Turn over)
(iii) Flow of statements
(iv) None of the above

(b) The \texttt{g Count ( )} function counts the :

(i) Extracted Character
(ii) Inserted Character
(iii) Both (i) and (ii)
(iv) None of the above

(c) Encapsulation means :

(i) Protection data
(ii) Allowing global access
(iii) Data hiding
(iv) Both (i) and (ii)

(d) The size of void pointer is :

(i) 0 byte
(ii) 2 byte
(iii) 4 byte
(iv) 8 byte
(e) In C++, it is possible to pass values to function by:
   (i) Call by value
   (ii) Call by address
   (iii) Call by reference
   (iv) All of the above

(f) Exception is generated in:
   (i) Try block
   (ii) Catch block
   (iii) Throw block
   (iv) None of the above

(g) A and B are two string objects. A = "abc" and B = "xyz". A = A + B will produce:
   (i) "abcxyz"
   (ii) "abc"
   (iii) "xyzabc"
   (iv) None of the above

(h) An iterator is similar to:
   (i) Pointer

JX - 22/5  (3)  (Turn over)
(ii) Array
(iii) Class
(iv) None of the above

(i) Range of unsigned char is:
   (i) – 128 to 127
   (ii) 0 to 255
   (iii) 0 to 65535
   (iv) None of the above

(j) The :: is known as:
   (i) Scope access operator
   (ii) Double colon
   (iii) Both (i) and (ii)
   (iv) None of the above

Group – B

(Long-answer Type Questions)

Answer any four of the following: \(15 \times 4 = 60\)

2. (a) Explain the key concepts of OOP. Define advantages and disadvantages of OOP. Describe different parts of C++ programs.

JX – 22/5 (4) Contd.
(b) What is inline ( ) function? Define characteristics of inline ( ) function and explain in what use inline ( ) function is not used.

3. (a) Write a program to create a class complex which accepts real and imaginary data member, all constructor ( ), destructor ( ) and + operator overloading function to add two objects and returns the sum as objects.

(b) Define the difference between static binding and dynamic binding with suitable example.

4. (a) Write a program to create a class that has a member function which is friend function of another class with suitable example.

(b) What is stream? Define Input stream and Output stream hierarchy.

5. (a) What are static member variable and functions? Write a program to count number between 1 to 100, which are not divisible by 2, 3 and 7.

JX – 22/5 ( 5 ) ( Turn over )
(b) Write a program that would create a set at student records and stores into the file. The program should allow the user to add records of new student or delete record if the student leaves the collage. It should also display all the records in ascending order of the student roll numbers.

6. (a) Write a program to create a class employee that contains name, roll and address, dynamic constructor and dynamic destructor to add or remove records dynamically.

(b) Write a program to create an array of strings. Read and display the string using constructor and destructor.

7. (a) What are the advantages and disadvantages of inheritance?

(b) Explain hierarchical inheritance.

8. (a) Describe the use of public, private and protected access specifies.

(b) What is Constructor Overloading? Explain it with example.

JX - 22/5 (6) Contd.
9. (a) What are the Constant Object? How they are declared?
(b) Write a program to create objects without name.

10. (a) What is file? What are steps involved in manipulating a file in a C++ program.
(b) Explain the various file stream classes need for file manipulations?