

COPYRIGHT RESERVED

BCA(II) — COMP/
2/X/11

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 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

- (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.

- (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.

- (b) Write a program that would create a set of student records and store them into a file. The program should allow the user to add records of new students or delete records if a student leaves the college. 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 strings 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 specifiers.
- (b) What is Constructor Overloading? Explain it with an example.

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 ?

