

Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 03

Paper ID [A0214]

(Please fill this Paper ID in OMR Sheet)

BCA (304) (S05) (Old) (Sem. - 3rd)

OBJECT ORIENTED PROGRAMMING USING IN C++

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

(15 × 2 = 30)

Q1)

- a) What do you mean by header files?
- b) What is #define directive?
- c) What is *endl* manipulator?
- d) Explain the *while* loop.
- e) What is *switch* statement?
- f) How arrays are defined in C++?
- g) How objects are defined for a class?
- h) What are destructors?
- i) What is the purpose of class specifiers(declaration)?
- j) Explain polymorphism.
- k) Explain the operator keyword.
- l) What are pointer variables?
- m) What is *getline()* function?
- n) Describe *open()* function.
- o) Write a decelerator for **main()** that will enable command line arguments.

Section - B

(9 × 5 = 45)

- Q2)** What are the characteristics of Object Oriented Programming? Explain briefly.
- Q3)** Give Various Basic C++ Data types with their keywords and details.
- Q4)** Assume you want to generate a table of multiples of any given number. Write a program that allows the user to enter the number and then generates the table, formatting it into ten columns and 5 lines.
- Q5)** A Point on the 2-D plane can be represented by two numbers: an X-coordinate and Y-Coordinate. For example, (4,5) represents a point 4 units to the right of the origin along the x-axis and 5-units up the y-axis. The sum of the two points can be defined as new point whose x-coordinate is the sum of the X-coordinate of the two points, and whose Y-coordinate is the sum of their Y-Coordinates. Write a program that uses a structure called **point** to model a point. Define three points, and have the user input values to two of them. Then set the third point equal to the sum of the other two, and display the value of the new point.
- Q6)** Define function. How the arguments are passed in a function.
- Q7)** Differentiate between private and public class. Elaborate with suitable example.
- Q8)** Create a Class **time** that has separate int member data for hours, minutes and seconds. One constructor should initialize this data to 0, and the another should initialize it to fixed values. A member function should display it, in 11:59:59 format. The final member function should add two objects of type **time** passed as arguments. A **main()** program should create two initialize objects, and the one that is not initialized. Then it should add two initialized values together, leaving the result in the third **time** variable. Finally it should display the values of this third variable.
- Q9)** Imagine a publishing Company that markets both books and audiocassettes version of its works. Create a Class **publication** that stores the title and price of a publication. From this class drive two classes: **book**, which adds a page count; and **tape**, which adds a playing time in minutes. Each of these three classes should have a **getdata()** function to get its data from the user at the keyboard and a **putdata()** function to display its data. Write a **main()** program to test the **book** and **tape** classes by creating instances of them, asking the user to fill their data with **getdata()** and then displaying the data with **putdata()**.

Q10) Explain the STREAM class hierarchy for I/O in C++ programming.

Q11) Explain the following:

- (a) fstream.h
- (b) ofstream.h
- (c) ifstream.h

Q12) Write simple program to write some three string lines to the file named “textl.text”.

Q13) Explain the following functions:

- (a) seekg()
- (b) getdata()
- (c) putdata()
- (d) tellg()

