(i) Printed Pages : 2 Roll No. .....

(ii) Questions : 9 Sub. Code : 1 7 2 9 2

Exam. Code : 0 0 0 3

B.A./B.Sc.(General) 3rd Semester

(2124)

COMPUTER SCIENCE

Paper : CS06 Theory-B Object Oriented Programming Using C++

Time Allowed : Three Hours] [Maximum Marks : 30

Note :—Attempt *five* questions in all, including Q. No. 9 (Section-E) which is compulsory and selecting *one* question each from Sections A—D.

SECTION—A

1. Differentiate between Object Oriented and Procedure Oriented language ? What are the advantages of object oriented programming ? 6

2. Write a program to define a **class** to represent a **rectangle**. Include the following members :

   Data members : length, breadth.

   Member Functions : (Define 2 functions inside the class and 2 outside the class) :

   (i) To assign initial values

   (ii) To calculate the area of a rectangle.

   (iii) To calculate the perimeter of a rectangle

   (iv) To display length, breadth, area, perimeter. 6

SECTION—B

3. (a) What is meant by visibility modes or access specifiers ? How is private mode different from protected mode ?

   (b) Discuss the use of scope resolution operator. $2\times3=6$

4. Explain static data members and static member functions using a suitable example. 6

SECTION—C

5. Illustrate the concept of parameterized constructor through a relevant program. 6

6. What is inheritance ? Explain the different types of inheritance in C++. Discuss the advantages of inheritance. 6

SECTION—D

7. Explain function overloading with a suitable C++ code. 6

8. Briefly explain :

   (i) Virtual Function

   (ii) Pure Virtual Function. 6

SECTION—E

9. (a) What is Encapsulation ?

   (b) What is the purpose of a destructor function ?

   (c) What is nesting of classes ?

   (d) List the operators that cannot be overloaded.

   (e) Define an object.

   (f) What is operator loading ? $1\times6=6$