

Total No. of printed pages = 3

Co-506/OOM/Comp/5th Sem/2016/N

OBJECT ORIENTED METHODOLOGY

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer any *five* questions.

1. (a) What are the unique advantages of object oriented programming ? 3
- (b) Distinguish between the following terms :
 - (i) Objects and class
 - (ii) Data abstraction and data encapsulation. 2×3=6
- (c) Compare object oriented language and procedure oriented language. 5
2. (a) Write a program in C++ to input a number and print its square if it is even and cube if it is odd. 5

[Turn over

(b) Differentiate between : $3 \times 2 = 6$

(i) While and do while loop

(ii) New and delete.

(c) How much space will the following array take in the memory ? 3

(i) float a [3] [6];

(ii) int x [3];

3. (a) Write the difference between class and structure. 3

(b) Write a C++ program to add two length (6m 50 cm) and (7m 60 cm). 7

(c) Distinguish among public, private and protected access. 4

4. (a) Write a class difference for a student— his roll number, name, marks in five subjects are to be stored. Add adequate functions to input, display data and also to calculate average marks of the student. 6

(b) Explain with example the concept of function overloading. 4

(c) Write the characteristics of construction and destruction. 4

5. (a) What is the syntax of operator function in operator overloading ? 4
- (b) Write the advantages of operator overloading. 3
- (c) What are the implications of using private, public and protected access specifier for declaring class members for a base class ? 3
- (d) Write a C++ program to define a class student and inherit class total marks and display from it. 6
6. (a) What is friend function ? 2
- (b) Explain how two classes can be made friends. 3
- (c) Write about 'this' pointer in brief. 3
- (d) Define pure virtual function. 2
- (e) What is template ? Distinguish between a class template and function template. 1+3=4