

MCA (INTEGRATED)
(SEM III) THEORY EXAMINATION 2018-19
OBJECT ORIENTED PROGRAMMING IN C++

Time: 3 Hours**Total Marks: 70****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

- a. What is the use of scope resolution operator?
- b. How does a main() function in C++ differ from main in C?
- c. What is Polymorphism?
- d. What do you understand by Data abstraction?
- e. Write the name of the function in C++ used for operating a file for input only?
- f. What is inline function? How does it work?
- g. What is object oriented programming?

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

- a. What do you understand by inheritance? Explain the different types of inheritance by taking a suitable example.
- b. Write a program in C++ using class and objects. Take array of objects and explain how it can be used.
- c. What are the various ways of handling exceptions? Which one is the best? Explain with example.
- d. What is Constructor? Explain types of constructor with example.
- e. What is difference between public derivation and private derivation?

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

- (a) Explain cin and cout. Discuss stream class hierarchy in C++.
- (b) What is the difference between opening a file with constructor function and opening a file with open () function.

4. Attempt any *one* part of the following: 7 x 1 = 7

- (a) What do you mean by static class members? Explain the characteristics of static class members with suitable example.
- (b) What are class templates? How are they created? What is the need for class templates?

5. Attempt any *one* part of the following: 7 x 1 = 7

- (a) When do we use multi catch handlers? Explain with an example.
- (b) What is data hiding? What are the different mechanisms for protecting data from the external users of a class objects?

6. Attempt any *one* part of the following: 7 x 1 = 7
- (a) Write a program to overload the unary minus operator using friend function.
 - (b) What is reference variable? Explain call by reference in C++ with proper example.

7. Attempt any *one* part of the following: 7 x 1 = 7
- (a) What is procedure-oriented language? What are the main characteristics?
 - (b) Explain the following:
 - Non public constructors
 - Inline Function
 - Virtual Function