

**2018**  
**COMPUTER SCIENCE AND TECHNOLOGY**  
**CSIT 3.6.1**  
**INTRODUCTION TO OBJECT-ORIENTED**  
**PROGRAMMING IN C++**  
**Full Marks: 40**  
**Time: 1.5 Hours**

*The figures in the margin indicates full marks for the questions :*

- 1. Answer the following:** **1x6=6**
- (a) What is Object Oriented Programming?
  - (b) What are classes and objects?
  - (c) What is multi-dimensional array?
  - (d) What is friend function?
  - (e) How are memories allocated to objects?
  - (f) What is static member variable?

**Question No. 2 to 6 carries 2 (two) marks each.** **2x5=10**

- 2. What are constructors and destructors?
- 3. Define inheritance? What is hybrid inheritance?
- 4. What is virtual base class? How it solves the ambiguity in multipath inheritance?
- 5. What is polymorphism? What is virtual function?
- 6. What is operator overloading and function overloading?
- 7. Write a C++ program to declare friend function in two classes. Calculate the sum of integers of both the classes using friend() function. **8**

*Or,*

Write a C++ program invoking constructors with arguments in single Inheritance.

8. Write a C++ program invoking constructors and destructors in multi-level Inheritance. 8

*Or*

Write a C++ program invoking constructors and destructors in multiple Inheritance.

9. Write a C++ program of operator overloading. 8

*Or*

write a C++ program of function overloading.