Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech. (Artificial Intelligence & Machine Learning / Artificial Intelligence (AI) and Data Science/CSE/(CSE) (Artificial Intelligence & Machine Learning)/(CSE) (Data Science)/(CSE) (IOT)/(Data Science)/CSE (Internet of Things and Cyber Security including Block Chain Technology)) (Sem–3)

OBJECT ORIENTED PROGRAMMING

Subject Code : BTCS-302-18

M.Code : 76437

Date of Examination : 03-06-2023

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

   a) What are input and output statements in C++?

   b) Define function overloading.

   c) How an external function is made friend of a class?

   d) What do you mean by parameter passing by reference?

   e) Differentiate between private and protected keywords?

   f) What is the sequence of execution of constructors and destructors in Inheritance?

   g) Are virtual functions hierarchical?

   h) Distinguish between early binding and late binding.

   i) What are the keywords associated with exception handling in C++?

   j) What are the various classes available for file operations in C++?

SECTION-B

2. Discuss any two loop statements used in C++ with one example of each.

3. What do you mean by constructor? What are the various types of constructors?

4. What is protected base class inheritance?

5. What is an abstract class? Explain the procedure to create an abstract class with Citable examples.

6. What are the various file streams available in C++? Explain the various methods of opening files in C++ giving suitable examples.

SECTION-C

7. a) What is a scope resolution operator? Describe its different uses.

   b) Define Operator overloading. How do you achieve operator overloading using friend function?

8. What is inheritance? Explain the different types of Inheritance. How do you inherit multiple base classes?

9. a) Explain the concept of Virtual function.

   b) Discuss the concept of exception handling and different types of exceptions.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.