Roll No. : .....

Total No. of Questions : **11**] [Total No. of Printed Pages : **3**

BPP–1109

M.Sc. (Previous) Examination, 2022

INFORMATION TECHNOLOGY

Paper - MIT-102

(OOPs with C++)

*Time : **3** Hours*] [*Maximum Marks : **50***

Section–A **(Marks : 2 × 10 = 20)**

Note :– Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section–B **(Marks : 3 × 5 = 15)**

Note :– Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **3** marks.

Section–C **(Marks : 5 × 3 = 15)**

Note :– Answer any *three* questions out of five (Answer limit **500** words). Each question carries **5** marks.

Section–A

1. (i) Define OOPs.

   (ii) Write the character set of C++.

(iii) Explain range of a datatype.

(iv) Give any *five* library functions.

(v) Define Reference.

(vi) What is Inheritance ?

(vii) Differentiate class and object.

(viii) Give light on the concept of member functions and non-member functions of a class.

(ix) Define inline function.

(x) Give any *five* additional features of C++ from C++11/C++14/C++17.

Section–B

2. Differentiate procedural and object oriented programming.

Or

Explain operator precedence and associativity.

3. Write a program to show how a function can be called by value and by reference.

Or

How pointers can be passed in a function ? Give example.

4. What do you understand by dynamic array ? Why is it important ?

Or

Write a note on addressing of a one dimensional and two dimensional array.

5. Differentiate function overloading and function overriding.

Or

What is Abstraction ? How is it implemented in C++ ? Explain.

6. What are different stream classes in C++ ?

Or

Give any *five* manipulation in C++. Explain each with a suitable example.

Section–C

7. What are the benefits of OOPs ? Write different characteristics of OOPs.

8. What is Recursion ? How is it useful ? Explain how a recursive function works when we use it for finding factorial.

9. What is Structure ? How is it different from array ? Write a program to create a dynamic structure.

10. Define constructor and destructor. Explain various types of constructor. Write a program for copy constructor ?

11. What do you understand by operator overloading ? Explain operator overloading with member function and friend function.