

**7254**

**M.Sc. II<sup>nd</sup> Semester EXAMINATION, 2018**

**IT**

**Paper – IV**

**(Object Oriented Programming Using C++)**

Time: Three Hours

Maximum Marks: 80

**PART – A (खण्ड – अ)**

[Marks: 20]

*Answer all questions (50 words each).*

*All questions carry equal marks.*

*सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न का उत्तर 50 शब्दों से अधिक न हो।*

*सभी प्रश्नों के अंक समान हैं।*

**PART – B (खण्ड – ब)**

[Marks: 40]

*Answer five questions (250 words each).*

*Selecting one from each unit. All questions carry equal marks.*

*प्रत्येक इकाई से एक-एक प्रश्न चुनते हुए, कुल पाँच प्रश्न कीजिए।*

*प्रत्येक प्रश्न का उत्तर 250 शब्दों से अधिक न हो।*

*सभी प्रश्नों के अंक समान हैं।*

**PART – C (खण्ड – स)**

[Marks: 20]

*Answer any two questions (300 words each).*

*All questions carry equal marks.*

*कोई दो प्रश्न कीजिए। प्रत्येक प्रश्न का उत्तर 300 शब्दों से अधिक न हो।*

*सभी प्रश्नों के अंक समान हैं।*

## **PART – A**

- Q.1 (i) Define encapsulation.
- (ii) Define Inline functions.
- (iii) Define class and object.
- (iv) What is the need of this pointer?
- (v) Explain utility of virtual base class and virtual functions.
- (vi) What are abstract classes? Explain their need?
- (vii) What is the significant of template class?
- (viii) Explain common benefits of exception handling.
- (xi) Give name of basic stream classes used for file handling.
- (x) Compare between binary and text file processing.

## **PART – B**

### **UNIT -I**

- Q.2 Compare between object oriented and procedure oriented programming.
- Q.3 (a) Explain dynamic memory allocation and deallocation in c + + with example.
- (b) Define reference variable. Explain how they are different from other variables.

## UNIT -II

- Q.4 (a) What are constructors? Explain use of constructor overloading with example.
- (b) Write a C++ program to demonstrate copy constructor.
- Q.5 (a) Compare between static and Non- static members of a class fractionally.
- (b) Write a program to overload ++ operator.

## UNIT -III

- Q.6 (a) Explain different forms of inheritance.
- (b) Explain significance of different access specifiers used to control visibility of members of a class.
- Q.7 (a) What is the utility of pure virtual function? Explain with suitable example.
- (b) Compare between early and late binding concept of members in a class.

## UNIT -IV

- Q.8 Write a generic functions that will make addition of integers, Float and Double values. Create a menu with appropriate options and read values from the user.
- Q.9 Explain functioning of exception handling in C++. Explain utility of try, Catch blocks.

## UNIT -V

- Q.10 Explain standard template libraries.
- Q.11 Explain different error handling functions used during file handling.

## **PART – C**

Q.12 Compare following –

- (a) Default arguments Vs function overloading
- (b) Implicit Vs explicit conversion.
- (c) Pointers Vs reference variable.

Q.13 (a) What do you mean by friend function and friend class? Explain with suitable example.

- (b) What do you mean by polymorphism? Write a program to demonstrate overloaded functions?

Q.14 Write a program to demonstrate multilevel and multiple inheritance?

Q.15 (a) Compare between class template and file template.

- (b) Write a function in C++ to Count Number of digits present in a text file “Para.txt”.

Q.16 (a) Explain sequential and random file management in C++.

- (b) Compare between error handling and exception handling.
-