

201

B.C.A. (Part-II) Examination – 2024
(Faculty of Science)

(Three-Year Scheme of 10+2+3 Pattern)

Object Oriented Programming Through C++

Time Allowed: Three Hours

Maximum Marks: 100

Answer of all the questions (short answer as well as are to be given in the main answer-book only. Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before start writing answers of questions.

Question paper consists of three parts. All three parts are compulsory.

PART-I : (Very short answer) consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.

PART-II : (Short answer) consists of 5 questions of 4 marks each. Maximum limit for each question is up to 80 words.

PART-III : (Long answer) consists of 5 questions of 12 marks each with one question from each unit with internal choice.

PART-I

1. Very short answer type questions -

[10×2=20]

- (a) What is data type?
- (b) What do you mean by functional programming?
- (c) What is variable?
- (d) What do you mean by unary operator?
- (e) What is destructors?
- (f) What is 'this' pointer?
- (g) What is derived class?
- (h) What is pure virtual function?
- (i) What are the basic operations performs on file?
- (j) What is Templates?

PART-II

[5×4=20]

2. Short answer type questions -

- (a) What is OOP Paradigm? Explain.
- (b) Explain the structure of C++ program with an example.
- (c) How to create classes and objects in C++ with an example.
- (d) What are the different types of polymorphism?
- (e) Explain any three stream state member functions.

PART-III

3. Define object oriented programming. and explain feature of object oriented programming.

[3+9=12]

OR

- (a) Differentiate between Object Oriented Programming and Functional Programming. [8]
 - (b) What are the benefits of OOP? [4]
4. What are the different data types present in C++? Explain each data types. [12]

OR

- (a) What is the difference between a while loop and a do-while loop? [6]
 - (b) What is an Array? Explain different types of Array with example. [6]
5. Explain friend function with an example. What are the merits and demerits of using the friend function? [6+6=12]

OR

- What is constructor? Explain types of constructor with example. [3+9=12]
6. What is the importance of Inheritance? How to define derived class explain with suitable example? [5+7=12]

OR

- What is operator overloading? How to define operator overloading? Explain with suitable example. [4+8=12]
7. What is the difference between opening a file with constructor function and opening a file with open() function? Describe the various file access mode? [8+4=12]

OR

- (i) Write a C++ program to swap two values using concept of function Templates. [6]
- (ii) What is try, catch and throw? Explain with an example. [6]