S.S.Jain Subodh College of Global Excellence
Pre-University Examination-2023

BCA-II

Object Oriented Concept Through c++

Paper-VI

Time:3 hours **Max Marks-100**

All questions are compulsory.

Part-I

Q.1. All question carries 2 marks. **[10*2=20]**

a) What is OOP?
b) What is classes?
c) What is an inline function?
d) What is the difference between function overloading and function overriding?
e) What is binary file?
f) What is this pointer?
g) Enlist any four methods provided by istream and ostream?
h) What is data abstraction?
i) Define pure virtual function?
j) What do you mean by type conversion?

Part-II **[5*4=20]**

Q.2. What is access modifier? Explain each.

Q.3. Explain about various storage classes in C++ with suitable example?

Q4. List and explain in brief various function required for random access operation.

Q5 .Explain polymorphism with example in detail.

Q6 Differentiate between jumping statement and loops?

Part-III

Q7. Write difference between object oriented programming and procedure oriented programming in detail. **12**

OR

Define OOP's. Describe characteristics of OOP's.

Q.8. Describe data types in C++ in detail. 12

OR

Write a program to read N value in an array and find highest and lowest number.

Q.9. Explain friend function and also explain its characteristics with merit and demerits of using friend function? 12

OR

How to define member function of a class? Explain with example.

Q.10. Define inheritance? Explain different types of inheritance with suitable example.12

OR

What is the operator overloading? Explain with suitable example.

Q.11. What is exception? How many types of exception? How to handle exception in C++ explain in detail? 12

OR

What is class template? Write the syntax for class template. Write an example program for class template.

This question paper contains 2 printed pages. Roll No. 675669

B.C.A. (Pt.-II) Obj. Ori. Pro. Con.

206/236-A

B.C.A. (Part-II) Examination, 2023 401860

(Faculty of Science)

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

Object Oriented Programming Concepts (Through C++)

Paper : 206/236-A

Time Allowed : 3 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 you 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 choices.

PART-I

1. Attempt all the questions. 10×2=20

   (a) Define Encapsulation.

   (b) Briefly discuss the concept of Data Abstraction.

   (c) What are Tokens? Name its types.

   (d) Write the use and name types of Bitwise operators in C++.

   (e) Why is 'this pointer' used?

   (f) Define the concept of inline functions.

   (g) What do you mean by Inheritance?

(h) What is operator overloading?

(i) Differentiate between Sequential and Random Files.

(j) Why are templates used in Programming?

PART-II

2. Attempt all questions. 5×4=20

(a) Write any four differentiation between Functional and Object Oriented Programming.

(b) What are Structures? How does a C++ Structure differ from a C++ Class?

(c) What are friend functions? Explain.

(d) Discuss the importance of inheritance in detail.

(e) Write in detail the syntax and example of opening and closing a file in C++.

PART-III

3. (a) What is OOP Approach? Discuss in detail the key elements and features of OOP. 6

(b) Explain the concept of User-defined Data Types. 6

Or

(a) Discuss the benefits of OOP approach in detail. 6

(b) How is Polymorphism achieved through Overloading in C++? Explain. 6

4. Discuss with syntax and examples all the Conditional Statements available in C++. 12

Or

Discuss with syntax and examples all the Looping Statements available in C++. 12

5. What are Classes and Objects? Describe the C++ syntax for declaring a class and defining objects in C++ with examples. 12

Or

(a) Write a C++ program to show the use of Friend Function. 6

(b) Show with examples what are constructors? 6

6. Explain the different forms of Inheritance with examples. 12

Or

(a) What are Virtual and Pure Virtual Functions? 6

(b) Write a C++ program to show the use of Operator Overloading. 6

7. (a) What is a File? What are the steps involved in using a file in a C++ program? 8

(b) What do you understand by File mode? Describe the various file mode options available in C++. 4

Or

Discuss the Exception Handling Mechanism in detail with proper example. 12

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