

206/236-A

B.C.A. (Part-II-Due Paper) EXAMINATION – 2021

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

OBJECT ORIENTED PROGRAMMING CONCEPTS (Through C++)

Time Allowed: Three Hours

Maximum Marks: 100

Answers of **all** the questions (Short answer as well as descriptive) 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 10 questions of two marks each with two questions from each unit. Maximum limit for each question is up to 40 words.

Part - II (short answer) consists 5 questions of four marks each with one question from each unit. Maximum limit for each question is up to 80 words.

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

Part – I

Attempt all questions. Each question carries 2 marks.

10 x 2=20

1. (i) Define class with example?
- (ii) What do you mean by "private inheritance"?
- (iii) What is 'jumping' statement?
- (iv) What do you mean by "structure -tag"?
- (v) What is 'this'?
- (vi) What is 'destructor'?

- (vii) What is 'derived class'?
- (viii) What is "constructor call order"?
- (ix) What are 'files'?
- (x) What is 'try' in Exception Handling?

Part – II

Attempt all questions. Each question carries 4 marks.

- 2. Describe the OOP paradigm by taking suitable example. 4
- 3. Explain type conversion in C++ with example. 4
- 4. How do you pass an object into a function in C++? Explain. 4
- 5. How can a derived class object pass values to the base class constructor? Explain. 4
- 6. How many modes can be used while opening a file in C++ program? Explain. 4

Part – III

- 7. Differentiate between functional programming and object-oriented programming? Give suitable examples to explain 12

OR

Discuss the characteristics of Object-Oriented Language by providing appropriate examples. 12

- 8. Explain the Array and its types by giving suitable examples or writing a program which uses arrays and initializes them. 12

OR

How do you use pointers of a structure? Explain by taking suitable example. 12

- 9. How can you define a member function of a class at outside the class? Explain. 12

OR

- Describe constructor and discuss various types of constructors by taking suitable example. 12
- 10 Explain various types of Inheritance. What is the 'ambiguity' that can happen while using multiple class inheritance? Explain. 12

OR

- What do you mean by Virtual Functions? Explain by taking suitable example. Also explain the "pure virtual function". 12
- 11 Write a program in C++ which creates a 'File' and write "Welcome to University of Rajasthan" in that file. Then, the program should re-open the file and read its contents and display those contents to the console. 12

OR

- What do you understand by Exception-Handling" in C++? Explain how the exception handling is performed in C++ by giving appropriate example or writing a program of exception handling in C++. 12