

Faculty of Science
B.Sc (Computer Science) I-Year, CBCS –II Semester
Regular Examinations -June/July, 2022
PAPER: Programming in C++

Time: 3 Hours

Max Marks: 80

Section-A

- I. Answer any *eight* of the following questions (8x4=32 Marks)
1. Define OOP. How it is different from Procedural Languages?
 2. What is String? Explain String Handling functions provided by C++ library.
 3. Write about Inline functions.
 4. Explain friends of classes.
 5. Demonstrate Operator Overloading.
 6. Write about Arrays of Objects.
 7. Write a program to demonstrate Pure Virtual Functions.
 8. What is Polymorphism? Explain.
 9. Explain, How Constructors and Destructors of Base class are used in Derived class?
 10. Explain the handling of bad alloc Exception.
 11. Write about STL.
 12. Discuss about Function Template with advantages.

Section-B

- II. Answer the following questions (4x12=48 Marks)
- 13.(a) Write in detail about C++ Tokens.
(OR)
(b) What is parameter? Explain different types of parameter passing mechanisms used in functions.
14. (a) What is Class? Demonstrate different types of Access Specifiers.
(OR)
(b) What are Constructor and Destructor? Explain types of constructors used.
15. (a) Explain Formatted and Unformatted I/O Operations.
(OR)
(b) What is Inheritance? How C++ implements it? Explain.
16. (a) What is Exception? Explain Multiple Exception Handling with program.
(OR)
(b) What is Template? Explain Class Templates.

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B.Sc (Computer Science) I-Year, CBCS –II Semester
Backlog Examinations -Jan, 2023
PAPER: Programming in C++

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Section-A

- I. Answer any *eight* of the following questions (8x4=32 Marks)
1. List and Explain the Operators of C++.
 2. How to use reference variables as parameters to Functions? Explain.
 3. Demonstrate the usage of Default Arguments.
 4. Explain the usage of Public and Private members access.
 5. Explain Instance and Static members.
 6. Write about Aggregation.
 7. Write about Stream Classes.
 8. Explain Input and Output operations of C++.
 9. Explain, How to Redefine Base class functions in Derived class?
 10. How Data is extracted from the Exception class? Explain.
 11. Explain, How to define Objects of Class Template?
 12. Discuss about overloading of Function Template.

Section-B

- II. Answer the following questions (4x12=48 Marks)
13. (a) What is an Array? Explain, How do you Sort the elements of an Array?
(OR)
(b) What is OOP? Write the terminology, benefits, Languages and applications of OOP.
 14. (a) What is Inline Function? Explain the usage of Inline Member Functions.
Write the advantages of Inline functions.
(OR)
(b) Discuss about Constructors in detail.
 15. (a) What is Inheritance? Explain Protected Members and Class Access.
(OR)
(b) What is Polymorphism? How it is implemented in C++? Explain.
 16. (a) What is Exception? Explain Object Oriented Exception Handling.
(OR)
(b) What is Template? Explain Function Templates with multiple types.

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Section-A

- I. Answer any EIGHT of the following questions (8x4=32 Marks)
1. List and briefly explain the OOP concepts.
 2. Differentiate passing data by value and by reference
 3. Write a C++ program to search for a given element in a 1D array.
 4. Define a class. Write about public and private access specifiers.
 5. What is the use of friend function? Write a simple program to illustrate the same.
 6. Explain about static variables and members.
 7. What do you mean by virtual function?
 8. Define method overriding.
 9. Write about C++ streams.
 10. Define exception and explain the need for exception handling mechanism.
 11. What is a template? Mention the advantages of templates.
 12. Write a program to swap two numbers using function templates.

Section-B

- II. Answer the following questions (4x12=48 Marks)
- 13.(a) Write about the various control structures in C++.
(OR)
(b) What is function overloading? Write a program to demonstrate functions overloading.
- 14.(a) Define constructor and write about the types of constructors.
(OR)
(b) Discuss about Operator Overloading mechanism. Write a program to overload Unary minus operator.
- 15.(a) Explain about different types of Inheritance with an example program.
(OR)
(b) Explain Unformatted I/O Operations in C++.
- 16.(a) Explain exception handling mechanism in C++ with suitable program.
(OR)
(b) Write about different types of Templates. Write a program to illustrate the use of class templates.
