Subject Name: Advanced Java Programming

Subject Code: CT506A-N

Date: 15/11/2022 **Time: 10.00 A.M. TO 1.00 P.M.** **Total Marks: 70**

Instructions:

1. **Answer each section in a separate answer sheet.**
2. **All questions are Compulsory.**
3. **Indicate clearly, the option you attempt along with its respective question number.**
4. **Use the last page of the main supplementary of rough work.**

Section-I

Q-1 (A) What is Swing? Explain MVC architecture of Swing with a proper diagram. [5]

(B) Compare the following terms: [5]
(1) Swing and AWT
(2) java.sql and javax.sql packages

(C) What is the role of JDBC? Explain Type-3 Driver with proper diagram. [5]

OR

(C) Write a stored procedure to display records from the database. Write JDBC code to call that procedure. [5]

Q-2 (A) Using TCP Communication, write client and server programs to reverse a string. Client sends a string to Server and Server responds with reversed string. [5]

(B) Explain J2EE Architecture in detail. [5]

OR

Q-2 (A) Define Socket. Explain the difference between TCP and UDP. [5]

(B) Write code for a chat application using UDP (Both client & server programs). [5]

Q-3 (A) Discuss JDBC Components with a proper diagram. [5]

(B) Differentiate JDBC and Hibernate. [5]

OR

Q-3 (A) What is AOP? Write a note on "Managing Transaction" in Spring. [5]

(B) Enlist various JComponents.Explain JButton with ActionListener code.

Section-II

Q-4 (A) What is Servlet? Differentiate Generic and HTTP Servlet. [5]

(B) Write Servlet code to display student information from a database based on id which is entered in the textbox. [5]

(C) Explain any five scriplet tag with proper code. [5]

OR

(C) Explain JSP Custom Tag with proper examples . [5]

Q-5 (A) Differentiate between JSP and Servlets. [5]

(B) Explain RequestDispatcher in detail in Servlet. [5]

OR

Q-5 (A) Enlist session tracking mechanisms of Servlet. Explain any one of them. [5]

(B) Explain JSP Processing life cycle. [5]

Q-6 (A) Explain Spring Framework Architecture with a diagram. [5]

(B) What is HQL? Differentiate between HQL and SQL. [5]

OR

Q-6 (A) Explain Hibernate architecture with a proper diagram. [5]

(B) Explain the difference between Spring Dependency Injection and Inversion of Control. [5]

KADI SARVA VISHWAVIDYALAYA

B.E. Semester-II Examination (July -2022)

SUBJECT CODE: CC111-N SUBJECT NAME: Object Oriented Programming using C++

DATE: 09/07/2022 TIME: 10:30 am to 1:30 pm TOTAL MARKS: 70

Instructions:
1. Answer each section in separate Answer Sheet.
2. Use of scientific Calculator is permitted.
3. All questions are compulsory.
4. Indicate clearly, the options you attempted along with its respective question number.
5. Use the last page of main supplementary for rough work.

SECTION – 1

Q-1. **a)** Explain the difference between OOP and POP. **5**

b) Define Terms: i) Object ii) Class iii) Constant Variable iv) Token v) Identifiers. **5**

c) i) How does main() function in C differ from C++? Give General format of Class. **5**
ii) what is reference variable in c++.

OR

c) Explain the basic concept of OOPC and its advantages. **5**

Q-2. **a)** What is structure? Write a program in c using structure to enter rollno, marks of the three subject for 3 student and find total obtained by each student . **5**

b) i) Explain use of setw and endl manipulators. **5**
ii) Explain << and >> operator.

OR

Q-2. **a)** Explain function overloading. Write a program to calculate area of rectangle and triangle using function overloading. **5**

b) Explain scope resolution operator (::) with an example. **5**

Q-3. **a)** What is Inline Function? Explain with an Example. **5**

b) Explain Access specifiers: public and private with example. **5**

OR

Q-3. **a)** What is friend function? Write a program to find out sum of two private data members a and b of two classes X and Y using a common friend function. Assume that the prototype for both the classes will be void sum (X, Y). **5**

b) What is the use of constructor and destructor.Explain default constructor with example. **5**

SECTION – 2

Q-4.	a)	What is an operator Overloading? Write a program to overload binary + operator as a member function.	5
	b)	Explain overriding member function with example.	5
	c)	What is a constructor? Explain copy constructor and parameterized constructor with examples.	5
		OR	
	c)	Explain Late binding and abstract class with example.	5
Q-5.	a)	Define Inheritance. Write the types of Inheritance. Explain Inheritance with example. Consider Example with respect to print result of Student and Student Details.	5
	b)	Define virtual and pure virtual function with example.	5
		OR	
Q-5.	a)	Define multi-path inheritance with example.	5
	b)	What is polymorphism? Explain compile time and run time polymorphism.	5
Q-6.	a)	Explain Exception handling with example.	5
	b)	What is stream class? Explain ifstream, ofstream and fstream class.	5
		OR	
Q-6.	a)	Explain file i/o with stream with one example.	5
	b)	What is the purpose of using template in C++? Explain template function and template class with example.	5

******BEST OF LUCK******

Exam Number:_____

KADI SARVA VISHWAVIDYALAYA
B.E. 1st (REG/ATKT)) EXAMINATION FEBRUARY 2022

Subject Name : Object Oriented Programming Using 'C++' **Subject Code: CC111-N**
Date: 14/02/2022(Monday) **Time: 12.30 pm to 3.30 pm** **Total marks: 70**

Instructions:

1. **Answer each section in separate Answer sheet.**
2. **All questions are compulsory.**
3. **Indicate clearly, the options you attempt along with its respective question number.**
4. **Use the last page of main supplementary for rough work.**

Section-I

Q.1 (A) What is structure? Explain the C syntax of structure declaration with example. (5)

(B) What is scope resolution operator? Explain with example. (5)

(C) Differentiate between procedure oriented and object oriented programming. (5)

OR

(C) What is abstraction and encapsulation? Write a difference between Abstraction and Encapsulation. (5)

Q.2 (A) What is type conversion in C++? Explain implicit and explicit type conversion with example. (5)

(B) Create a class TIME with members hours, minutes, and seconds. Read values from keyboard and add two TIME objects (hint: by passing objects to function) and display result. (5)

OR

Q.2 (A) What are constructors? Explain different types of constructors and How are they different from member functions? (5)

(B) What is a class and object? How is it created? Explain with example. (5)

Q.3 (A) Explain abstract class with example. (5)

(B) What is a friend function? Why is it required? Explain with an example. (5)

OR

Q.3 (A) What is pointer? Explain how the pointer variable declared and initialized? Explain it with example. (5)

(B) Explain manipulators with example. (5)

Section-II

Q.4 (A) What are inline functions? Explain with example. (5)

(B) How does C++ uses concept of reusability? Write a program in C++ to illustrate use of Polymorphism. (5)

(C) Explain Function overloading with example. (5)

OR

(C) Write a C++ program to demonstrate function overloading. Create function area() that calculates area of circle, triangle and box. (5)

Q.5 (A) Explain operator overloading with example. (5)

(B) Discuss the role of access modes in inheritance and show their visibility when they are inherited as public, private and protected. (5)

OR

Q.5 (A) Write down the example to overload unary and binary operators in C++. (5)

(B) Explain different types of inheritance with block diagram and an example for each. (5)

Q.6 (A) Explain Virtual base function with example. (5)

(B) Explain try catch and throw exception handling in c++. (5)

OR

Q.6 (A) Explain the various file stream classes available for file operations. (5)

(B) Explain class template and function template. (5)

Seat. No. _____

KADI SARVA VISHWAVIDYALAYA

BE SEMESTER-II (New Course)Examination June 2023

Subject Name: OBJECT ORIENTED PROGRAMMING USING 'C++' **Subject Code: CC111-N**

Date:20/06/2023 **Time: 10:00am to 01:00pm** **Total Marks: 70**

Instructions:

1. Answer each section in separate answer sheet.
2. Use of scientific calculator is permitted.
3. All questions are Compulsory.
4. Indicate clearly, the option you attempt along with its respective question number.
5. Use the last page of main supplementary of rough work.

Section-I

Q-1	**(A)**	i) How does main() function in C differ from C++? Give General format of Class. ii) what is reference variable in c++.	[5]
	(B)	Define pointer? Explain pointer and array with example.	[5]
	(C)	Enlist and explain the basic characteristics of OOP in detail.	[5]
		OR	
	(C)	Define a structure called "Student" that represents a student's information, including their name, ID, and marks for three subjects: Math, English, and Science.	[5]
Q-2	**(A)**	Explain type conversion from class type to basic type and one class type to another class type with suitable example	[5]
	(B)	What is function overloading? Illustrate with suitable example.	[5]
		OR	
Q-2	**(A)**	Define Terms: i) Object ii) Class iii) Destructor iv) Token v) Identifiers.	[5]
	(B)	Explain Access specifiers: public and private with example.	[5]
Q-3	**(A)**	Explain inline function with suitable example	[5]
	(B)	What is a constructor? Explain different types of constructors with an appropriate example.	[5]
		OR	
Q-3	**(A)**	What is friend Function? Explain the characteristics of friend function	[5]
	(B)	Explain 'this' pointer' with example.	[5]

Section-II

Q-4	(A)	Explain various forms of inheritance with diagrammatic illustrations. Also explain any one type of inheritance with an appropriate program.	[5]
	(B)	Explain call by value and call by reference with example.	[5]
	(C)	What is an operator Overloading? Write a program to overload binary '+' operator as a member function.	[5]
		OR	
	(C)	Explain overriding member function with example.	[5]
Q-5	(A)	Describe abstract class with example	[5]
	(B)	Define virtual and pure virtual function with example.	[5]
		OR	
Q-5	(A)	Explain Runtime polymorphism. Explain and demonstrate, how virtual function to achieve runtime polymorphism?	[5]
	(B)	Explain scope resolution operator (::) with an example.	[5]
Q-6	(A)	Explain Function and Class Templates with appropriate example.	[5]
	(B)	What is an Exception? Demonstrate try...catch block With example.	[5]
		OR	
Q-6	(A)	Describe various stream classes for console I/O operations.	[5]
	(B)	Write a C++ program to handle Exception "division by zero" situation	[5]

KADI SARVA VISHWAVIDYALAYA

B.E. Semester-II Examination January -2023

SUBJECT CODE: CC111-N SUBJECT NAME: Object Oriented Programming using C++

DATE: 23/01/2023 TIME: 10:00 am to 1:00 pm TOTAL MARKS: 70

Instructions:
1. Answer each section in separate Answer Sheet.
2. Use of scientific Calculator is permitted.
3. All questions are compulsory.
4. Indicate clearly, the options you attempted along with its respective question number.
5. Use the last page of main supplementary for rough work.

SECTION – 1

Q-1.	**a)**	Write a structure of C++ program and explain in brief.	**5**
	b)	Differentiate procedure oriented programming and object oriented programming.	**5**
	c)	Distinguish between the following terms: i) Data abstraction and Data encapsulation. ii) Dynamic binding and Message passing.	**5**
		OR	
	c)	Explain the basic concepts of OOPC and its advantages.	**5**
Q-2.	**a)**	Explain scope resolution operator (::) with suitable example.	**5**
	b)	Define Class & Object. Write syntax for accessing a data member and member function of a class. Explain how to define and access member function inside the class with example.	**5**
		OR	
Q-2.	**a)**	What is use of access specifiers? Explain various types of access specifiers.	**5**
	b)	What is function overloading in C++? Write a program that overloads volume functions that return volume of cube, cuboids and cylinder.	**5**
Q-3.	**a)**	What is inline function? Write a program to find the area of the bigger circle using inline function.	**5**
	b)	What is reference variable? Explain with suitable example.	**5**
		OR	
Q-3.	**a)**	What is friend function? What are advantages and disadvantages of friend function?	**5**
	b)	What is a constructor? Explain parameterized constructor with example.	**5**

SECTION – 2

Q-4.	a)	What is an operator Overloading? Write a program to overload Binary + operatoras a member function.	5
	b)	Explain abstract class with example.	5
	c)	Explain the use of destructor in c++. Discuss its features.	5
		OR	
	c)	Explain overridden function with example.	5
Q-5.	a)	Explain importance of inheritance. List Its types and explain anyone with an example.	5
	b)	Difference between virtual and pure virtual function in C++.	5
		OR	
Q-5.	a)	Define virtual base class with example.	5
	b)	What is polymorphism in C++? Explain compile time and run time polymorphism?	5
Q-6.	a)	What are three keywords for exception handling? Explain these three keywords in details.	5
	b)	What is stream class? Describe various stream classes for console I/O operation.	5
		OR	
Q-6.	a)	Explain with the help of example why template are used in programming.	5
	b)	Explain file handling in C++.	5

******BEST OF LUCK******