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Examination: Supplementary/Improvement Examination 2023
(for Odd Semester Examination 2022)

Paper Name: Introduction to Object Oriented Programming
Time: 3 Hours

Paper Code: BCA-301
Maximum Marks: 75

**Note: Mobile Phone/ programmable calculator/any smart device are not allowed inside the Examination Hall. Follow proper numbering for answering the questions.*

SECTION: A (35 Marks)

All questions are compulsory

35x1=35

Q.No.	Questions	CO	BL
1	The two major components of an object are _____ and _____.	1	2
2	cin and cout are the _____ (a) objects (b) macros (c) operators (d) functions	1	2
3	The null character needs a space of _____ byte(s).	1	1
4	When a program is executed, the _____ interact by sending a message to one another. (a) class (b) memory (c) objects (d) operating system	2	2
5	Predict the output of the following program: <pre>int xyz(int i = 0, int j = 0, int k) { return (i + j + k); } int main(){ cout << xyz(10); return 0;}</pre>	5	5
6	Type of an object of a class is _____.	3	1
7	A local variable declare _____ the function.	1	1
8	The process of building new classes from existing ones is called _____.	2	2
9	By default the members of a _____ are private whereas that of _____ are public.	3	1
10	this pointer points to _____.	4	4
11	If class A inherits its properties from class B, then A and B are known as _____ class and _____ class, respectively.	4	1
12	The ability of a function or operator to act in different ways on different data types is called _____.	4	4
13	Pascal and C are _____ languages, whereas C++ is _____ language.	2	2
14	The smallest individual unit in a program is known as a _____.	2	2
15	Fundamental data types may be used to construct _____ data types.	4	2
16	In C++, _____ operator requires three operands.	3	4
17	A function that is called automatically each time an object is destroyed is a _____.	3	4
18	In which type of inheritance does one class act as a superclass for more than one sub-class?	4	4
19	_____ is a member function of the class that doesn't consist of any return type.	3	2
20	The operator _____ is called the insertion or put-to operator.	4	4
21	_____ is used to implement late binding.	4	3
22	Can a constructor be virtual? (Yes/No)	3	2
23	Can a destructor be virtual? (Yes/No)	3	2
24	The process of converting one data type to another type is called _____.	50	4
25	Constructor function cannot be constant. (True/False)	2	2
26	The object can be passed as a function. (True/False)	5	4
27	Write the output of the following C++ program: <pre>class Stu {int i; }; int main(){ Stu s; cout << s.i;</pre>	5	5

	return 0;)		
28	_____ operator defines the size of an array.	4	2
29	_____ is the stream insertion operator.	4	1
30	_____ is the stream extraction operator.	4	4
31	_____ is a mechanism of combining more than one data members and member functions that implement on those data members into a single unit.	3	2
32	The feature that allows the same operations to be carried out differently depending on the object is _____.	3	2
33	The arguments used in function call statement are _____ arguments.	3	1
34	The arguments used in function definition are _____ arguments.	3	1
35	A _____ constructor can have default arguments.	4	2

SECTION-B

Attempt any FOUR Questions.

(5x4=20 Marks)

Q.No.	Questions	CO	BL
1	What are the different data types available in C++? Explain any two in detail.	1	2
2	Differentiate between a structure and a class.	1	3
3	Define the constructor overloading with a suitable example.	3	3
4	What is function overriding? Define with a suitable example.	4	4
5	What is an <i>inline</i> function? Explain with a suitable example.	2	2
6	By using an appropriate example define the concept of file <i>handling</i> .	5	4

SECTION-C

Attempt any TWO Questions.

(10x2=20 Marks)

Q.No.	Questions	CO	BL
1	What the different features are of object oriented programming. Explain all briefly.	2	6
2	What do you mean by data abstraction and data encapsulation? Define a class named Account with the data members as account_number, name_of_depositor, account_type, and account_balance; and member functions to initialize the members, to deposit the amount, to withdraw the amount, and to display the balance. Write a C++ program to test the Account class for 10 customers.	3	5
3	What is the difference between multilevel and multiple inheritance? Create a class Student with the data members namely roll number, name, and branch. Create another class Exam with the data members namely roll number and marks in five different subjects. Create a class named Result with the data members as total marks and results. Derive the Result class from the Student and Exam .	4	6
4	What do you mean by polymorphism? State any four points of differentiation between compile time polymorphism and run time polymorphism.	4	3

Course Outcomes (CO): from syllabus, BL* - Bloom's Taxonomy Levels (1: Remembering, 2: Understanding, 3: Applying, 4: Analyzing, 5: Evaluating, 6: Creating)