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**Department of Computer Science & Engineering**

**Odd Semester Examination-2024**

**Subject: Introduction to Object Oriented Programming**

**Paper Code: BCA 301/BSC 301**

**TIME: 2 Hours 30 Minutes** **MAX. MARKS: 60**

## Section – A (20 Marks)

**Note: Attempt ALL questions. Each question carries 1 mark.**

| Q. No. | Questions | CO* | BL* |
|---|---|---|---|
| 1. | In Object Oriented Programming programs are divided into objects (True/False) | CO1 | L2 |
| 2. | C++ is a case sensitive language (True/False) | CO1 | L2 |
| 3. | The linker program generates executable version of source code (True/False) | CO1 | L2 |
| 4. | Inline functions are invoked as normal functions (True/False) | CO2 | L2 |
| 5. | The default class scope is private. (True/False) | CO1 | L2 |
| 6. | A constructor function is called when a class object is created (True/False) | CO3 | L2 |
| 7. | do while loop is an entry control loop (True/False) | CO1 | L2 |
| 8. | If x2 is a variable ,then x2+2; is a valid statement in C++(True/False) | CO3 | L2 |
| 9. | A class cannot have array as its member (True/False) | CO5 | L2 |
| 10. | `parameterized constructors accept arguments (True/False) | CO1 | L2 |
| 11. | Which feature of OOP indicates code reusability?<br>A) Abstraction B) Polymorphism C) Encapsulation D) Inheritance | CO4 | L2 |
| 12. | What Header file is required in C++ to use OOP?<br>A) OOP can be used without any header file B) stdio.h C) iostream.h D) Stdlib.h | CO1 | L4 |
| 13. | Which feature of OOP reduces the use of nested classes?<br>A) Inheritance B) Abstraction C) Encapsulation D) Binding | CO1 | L2 |
| 14. | Abstraction and Encapsulation differs as?<br>A) Binding and hiding B) hiding and hiding C) hiding and binding D) Can be used both ways | CO3 | L2 |
| 15. | Which of the following shows the correct constructor<br>A) ()class_name B) -class_name C) class_name() D) ~class_name() | CO4 | L2 |
| 16. | C The scope resolution operator is<br>A) A comma B) A semicolon C) A colon D) Two colons | CO1 | L2 |
| 17. | Which feature of OOP is indicated by following code<br>Class student { int marks;};<br>Class topper:public student{ int age; topper(int age){this.age=age;}};<br>A) Encapsulation and inheritance B) Inheritance and polymorphism C) Polymorphism D) Inheritance | CO1 | L5 |
| 18. | If in Multiple inheritance,class C inherits class B ,class B inherits class A .In which sequence are their destructors called if an object of class C was declared<br>A) ~A() then~B()then ~C() B) ~C()then~A()then~B() C) ~C()then~B()then~A() D) ~B()then ~C()then~(A) | CO3 | L5 |

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|---|---|---|---|
| | Instance of which type of class can't be created<br>A) Parent class B) Abstract class C)Nested class D) Anonymous class | CO1 | L2 |
| **20.** | How many types of access specifiers are provided in OOP<br>a) 3 b) 4 c) 2 d) 1 | CO1 | L3 |

## SECTION – B (20 Marks)

❖ ***Attempt any FOUR questions. Each question is of 5 marks.***

| Q. No. | Questions | CO* | BL* |
|---|---|---|---|
| 1. | State difference between a)C and C++ b)Procedural programming and object-oriented programming | CO1 | L3 |
| 2. | What are the features of OOPS ? Explain Abstraction | CO2 | L5 |
| 3. | What are Default arguments? Explain its types as discussed in class. | CO2 | L2 |
| 4. | WAP using class to solve a Quadratic Equation | CO3 | L5 |
| 5. | What are constructors, Explain how they are defined and why they are used | CO1 | L2 |
| 6. | What do you understand by "Access specifiers" in a class Elaborate | CO3 | L4 |

## SECTION – C (20 Marks)

❖ ***Attempt any TWO questions. Each question is of 10 marks.***

| Q. No. | Questions | CO* | BL* |
|---|---|---|---|
| 1. | State the difference between while and do-while loop with the help of a suitable example | CO4 | L2 |
| 2. | What is function Overloading? Explain it with an Example | CO4 | L4 |
| 3. | What is the need of Inheritance ? Explain Multilevel inheritance with a suitable example | CO3 | L5 |
| 4. | What do you mean by Friend Function? What are its characteristics? WAP of call by value using Friend Function | CO5 | L5 |

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

**END**