

Enrollment No.....



Faculty of Science

End Sem (Even) Examination May-2019

CA3CO05 Object Oriented Programming

Programme: BCA

Branch/Specialisation: Computer
Application

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated.
Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Object oriented programming employs _____ programming approach. **1**
(a) Top-down (b) Procedural (c) Bottom-up (d) None of these
- ii. Object based language differs from object oriented language, as it does not support the following features: **1**
(a) Inheritance and dynamic binding
(b) Encapsulation and polymorphism
(c) Data abstraction and polymorphism
(d) Operator overloading and inheritance
- iii. In C++, cin and cout are the predefined stream: **1**
(a) Operator (b) Functions (c) Objects (d) Data types
- iv. Which of the following is not a correct variable type? **1**
(a) Float (b) Real (c) Int (d) Double
- v. A static member function can have access to: **1**
(a) Only static data member declared in the same class
(b) Only static member function declared in the same class
(c) Can access all the members declared in the same class
(d) Both (a) and (b)
- vi. Private members of the class are accessible: **1**
(a) Only to the members of the same class and members of other classes
(b) Only to the members of the same class
(c) Only to the members of the same class and main function
(d) None of these

P.T.O.

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- vii. If constructor is not defined, then how the objects of the class will be created? **1**
 (a) The compiler will generate error.
 (b) Error will occur at run-time.
 (c) Compiler provides its default constructor to build the object.
 (d) None of these
- viii. A derived class with several base classes is: **1**
 (a) Multilevel inheritance (b) Multiple inheritance
 (c) Hierarchical inheritance (d) Single inheritance
- ix. The stream that supplies data to the program is _____. **1**
 (a) Output stream (b) Input stream
 (c) Both (a) and (b) (d) None of these
- x. Generic catch handler is represented by _____. **1**
 (a) catch() (b) catch (---) (c) catch (...) (d) catch (void x)
- Q.2 i. What are the disadvantages of OOP? **2**
 ii. Explain the benefits of OOP. **3**
 iii. What is polymorphism? Discuss different ways in which polymorphism can be implemented in OOP. **5**
- OR iv. Differentiate between procedure oriented programming and object oriented programming paradigm. **5**
- Q.3 i. Discuss any two manipulators with the help of an example. **2**
 ii. Explain break, continue, goto and exit with appropriate examples. **8**
- OR iii. Discuss memory management operators in C++. Write a C++ program to illustrate one use of scope resolution operator. **8**
- Q.4 i. Briefly explain inline function. Write a program to illustrate the concept of inline function. **3**
 ii. Discuss different types of constructors. Write a program to illustrate definition of multiple constructors in a class. **7**
- OR iii. Discuss the characteristics of friend function. Write a program to illustrate the concept of friend function. **7**

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- Q.5 i. Specify rules for creating virtual function. Define pure virtual function. **4**
 ii. Discuss the impact of visibility mode on the way members of a class are derived. **6**
- OR iii. Explain operator overloading using member function. Write a C++ program to overload binary operator using member function. **6**
- Q.6 Attempt any two:
 i. How file operations are handled in C++? Discuss the classes used for file operations. **5**
 ii. Explain exception handling mechanism with a suitable example. **5**
 iii. Discuss how errors are handled during file operations. **5**

Marking Scheme

CA3CO05 Object Oriented Programming

Q.1	i.	Object oriented programming employs _____ programming approach. (c) Bottom-up	1
	ii.	Object based language differs from object oriented language, as it does not support the following features: (a) Inheritance and dynamic binding	1
	iii.	In C++, cin and cout are the predefined stream: (c) Objects	1
	iv.	Which of the following is not a correct variable type? (b) Real	1
	v.	A static member function can have access to: (d) Both (a) and (b)	1
	vi.	Private members of the class are accessible: (b) Only to the members of the same class	1
	vii.	If constructor is not defined, then how the objects of the class will be created? (c) Compiler provides its default constructor to build the object.	1
	viii.	A derived class with several base classes is: (b) Multiple inheritance	1
	ix.	The stream that supplies data to the program is _____. (b) Input stream	1
	x.	Generic catch handler is represented by _____. (c) catch (...)	1
Q.2	i.	Disadvantages of OOP	2
	ii.	Benefits of OOP At least 6 points 0.5 mark for each (0.5 mark * 6)	3
	iii.	Definition polymorphism 1 mark Three types of polymorphism 3 marks Diagram 1 mark	5
OR	iv.	Differentiate between procedure oriented programming and object oriented programming paradigm. At least 5 points 1 mark for each (1 mark * 5)	5
Q.3	i.	Any two manipulators with the help of an example. Description of 1 st manipulator 0.5 mark Example 0.5 mark	2

	ii.	Description of 2 nd manipulator	0.5 mark	8
		Example	0.5 mark	
		Explanation of break	1 mark	
		Example	1 mark	
		Explanation of continue	1 mark	
		Example	1 mark	
		Explanation of goto	1 mark	
		Example	1 mark	
		Explanation of exit	1 mark	
		Example	1 mark	
OR	iii.	Memory management operators in C++.		8
		Explanation of new with an example	3 marks	
		Explanation of delete with an example	3 marks	
		C++ program for scope resolution operator	2 marks	
Q.4	i.	Explanation of inline function	1 mark	3
		C++ program	2 marks	
		Types of constructors.	4 marks	7
OR	iii.	C++ program	3 marks	
		Characteristics of friend function	4 marks	7
		Program	3 marks	
Q.5	i.	Rules for creating virtual function	3 marks	4
		Pure virtual function definition	1 mark	
		Impact of visibility mode on the way members of a class are derived.		6
OR	iii.	Description, table diagrams for public . protected and private (2 marks * 3)		
		Operator overloading using member function.		6
		C++ program	3 marks	
Q.6	i.	Attempt any two:		5
		file operations are handled in C++	2 marks	
		Classes used for file operations	3 marks	
		Exception handling mechanism with an example.		5
	iii.	Errors are handled during file operations.		
				5
