

Enrollment No.....



Faculty of Engineering
End Sem Examination Dec 2024
IT3CO28 Object Oriented Programming

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. Assume suitable data if necessary. Notations and symbols have their usual meaning.

[2]

- vi. How many objects can be referenced from the same variables? **1** 1 3 1
 (a) One at a time
 (b) Many at a time
 (c) Many using array name
 (d) 7 at max at same time
- vii. Which type of inheritance leads to diamond problem? **1** 1 1 1
 (a) Single level
 (b) Multi-level
 (c) Multiple
 (d) Hierarchical
- viii. Which among the following can't be used for polymorphism? **1** 1 1 1
 (a) Static member functions
 (b) Member functions overloading
 (c) Predefined operator overloading
 (d) Constructor overloading
- ix. A template class defines the form of a class _____ on which it will operate. **1** 2 1 2
 (a) With full specification of the data
 (b) With full specification of the functions
 (c) Without full specification of the data
 (d) Without full specification of the functions
- x. It is _____ to define the abstract functions. **1** 1 1 1
 (a) Necessary for all the derived classes
 (b) Necessary for all the base classes
 (c) Mandatory for all the classes in program
 (d) Not mandatory for all the derived classes
- Q.2** i. Explain the concept of information hiding with its applications. **2** 2 2 2
 ii. Explain term object-oriented programming. Explain briefly different features of object-oriented programming. **8** 2 2 1
- OR iii. Write difference between object oriented and procedure based programming. **8** 3 3 2

[3]

- Q.3 i. Explain constructors and destructors. **2** 2 3 3
 ii. How we can create objects in object oriented programming? Explain different methods to accessing objects members. **8** 2 3 2
- OR iii. Write short note on:
 (a) Dynamic memory allocation
 (b) Static data members and functions
- Q.4 i. Define the following terms with example-
 (a) Association (b) Aggregation **4** 2 3 3
 ii. Differentiate multiplicities & navigability with the help of example. **6** 2 4 3
- OR iii. Explain the term relationships between classes. Explain its importance in context to object oriented programming. **6** 2 4 3
- Q.5 i. Explain and compare run time & compile time polymorphism. **4** 2 3 3
 ii. Explain operator and method overloading with the help of program. **6** 2 3 3
- OR iii. Explain inheritance with its types using a suitable example. **6** 2 3 3
- Q.6 Attempt any two:
 i. What is template? Explain uses & purpose of templates. **5** 1 3 3
 ii. What is file handling? Why we use file handling explain with example? **5** 1 5 3
 iii. Define container and write its different types. **5** 2 5 3

Marking Scheme

IT3CO28 (T) Object Oriented Programming (T)

Q.1				Q.4			
i)	c) Platform independent		1	i.	Define the following terms with example		4
ii)	b) Increases overhead of function definition always		1	a)	Association	2 marks	
iii)	b) classname()		1	b)	Aggregation	2 marks	
iv)	d) Must be passed by reference		1	ii.	Differentiate Multiplicities & Navigability with the help of example?	3 marks	6
v)	c) When object constructor is called		1	OR	iii. Relationships between Classes?	3 marks	6
vi)	a) One at a time		1		Its importance in context to object-oriented programming		
vii)	c) Multiple		1			3 marks	
viii)	a) Static member functions		1	Q.5			
ix)	c) Without full specification of the data on which		1	i.	Explain Run time & Compile Time Polymorphism?	2 marks	4
x)	a) Necessary for all the derived classes		1	ii.	Compare Run time & Compile Time Polymorphism?	2 marks	
				ii.	Explain Operator and Method Overloading Program	3 marks	6
				OR	iii. Explain inheritance Types suitable example	2 marks	6
						2 marks	
						2 marks	
				Q.6			
				Attempt any two: -			
				i.	What is Template?	2 marks	5
				ii.	Explain uses & purpose of templates?	3 marks	
				ii.	What is file handling?	2 marks	5
				iii.	Why we use file handling explain with example?	3 marks	
				iii.	Define Container write its different types?	2 marks	5

Q.2							
i.	Explain the concept of Information Hiding	1 mark	2				
	its applications?	1 mark					
ii.	Explain term object-oriented programming?	1 mark	8				
	Explain briefly different features of object-oriented programming? (Each features for 1 mark each)	7 marks					
OR	iii. Difference Between Object Oriented Programming Procedure Based Programming?	4 marks	8				
Q.3							
i.	Constructors	1 mark	2				
	Destructors	1 mark					
ii.	How we can Create Objects in object-oriented programming?		8				
	Explain different methods to accessing Objects Members?		4 marks				
OR	iii. a) Dynamic Memory Allocation b) Static Data Members and Functions	4 marks	8				
		4 marks					