

Enrollment No.....



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

Programme: B.Tech.

Branch/Specialisation: IT

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.

		Marks	BL	CO	PO	PSO
Q.1	i. Which among the following doesn't come under OOP concept?	1	2	1	1	
	(a) Data hiding (b) Message passing					
	(c) Platform independent (d) Data binding					
	ii. Which of the following is not true about polymorphism?	1	1	1	1	
	(a) Helps in redefining the same functionality					
	(b) Increases overhead of function definition always					
	(c) It is a feature of OOP					
	(d) Ease in readability of program					
	iii. Which among the following represents correct constructor?	1	2	1	1	
	(a) -classname() (b) classname()					
	(c) ()classname (d) ~classname()					
	iv. Object being passed to a copy constructor ____.	1	2	3	2	
	(a) Must not be mentioned in parameter list					
	(b) Must be passed with integer type					
	(c) Must be passed by value					
	(d) Must be passed by reference					
	v. When is the memory allocated for an object?	1	1	1	1	
	(a) At declaration of object					
	(b) At compile time					
	(c) When object constructor is called					
	(d) When object is initialized to another object					

[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	8	2	3	2
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	i)	c) Platform independent		1
	ii)	b) Increases overhead of function definition always		1
	iii)	b) classname()		1
	iv)	d) Must be passed by reference		1
	v)	c) When object constructor is called		1
	vi)	a) One at a time		1
	vii)	c) Multiple		1
	viii)	a) Static member functions		1
	ix)	c) Without full specification of the data on which		1
	x)	a) Necessary for all the derived classes		1
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	4 marks	8
		Procedure Based Programming?	4 marks	
Q.3	i.	Constructors	1 mark	2
		Destructors	1 mark	
	ii.	How we can Create Objects in object-oriented programming?		8
			4 marks	
		Explain different methods to accessing Objects Members?		
			4 marks	
OR	iii.	a) Dynamic Memory Allocation	4 marks	8
		b) Static Data Members and Functions	4 marks	

Q.4	i.	Define the following terms with example		4
		a) Association	2 marks	
		b) Aggregation	2 marks	
	ii.	Differentiate Multiplicities	3 marks	6
		& Navigability with the help of example?	3 marks	
OR	iii.	Relationships between Classes?	3 marks	6
		Its importance in context to object-oriented programming	3 marks	
Q.5	i.	Explain Run time & Compile Time Polymorphism?	2 marks	4
		Compare Run time & Compile Time Polymorphism?	2 marks	
	ii.	Explain Operator and Method Overloading	3 marks	6
		Program	3 marks	
OR	iii.	Explain inheritance	2 marks	6
		Types	2 marks	
		suitable example	2 marks	
Q.6 Attempt any two: -				
	i.	What is Template?	2 marks	5
		Explain uses & purpose of templates?	3 marks	
	ii.	What is file handling?	2 marks	5
		Why we use file handling explain with example?	3 marks	
	iii.	Define Container	2 marks	5
		write its different types?	3 marks	
