Total No. of Questions: 6 *Total No. of Printed Pages:3*

Enrollment No.....

Faculty of Engineering
End Sem Examination Dec-2023
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.

Q.1 i. Which among the following doesn't come under the OOP concept? **1**

(a) Data hiding (b) Message passing

(c) Platform independent (d) Data binding

ii. Which is the correct syntax of inheritance? **1**

(a) class base_classname :access derived_classname{ /*define class body*/ };

(b) class derived_classname : access base_classname{ /*define class body*/ };

(c) class derived_classname : base_classname{ /*define class body*/ };

(d) (d) class base_classname : derived_classname{ /*define class body*/ };

iii. The option below is not a member of a Class? **1**

(a) Friend Function (b) Static Function

(c) Virtual Function (d) Const Function

iv. What is a copy constructor? **1**

(a) A constructor that allows a user to move data from one object to another

(b) A constructor to initialize an object with the values of another object

(c) A constructor to check whether to objects are equal or not

(d) A constructor to kill other copies of a given object.

v. In C++ Inheritance relationship show with? **1**
(a) Has-A (b) Association
(c) Is-A (d) None of these

vi. Which type of relationship is modelled by Composition? **1**
(a) Is-A relationship (b) Has-A relationship
(c) Part-Of relationship (d) Have-A relationship

vii. If the same message is passed to objects of several different classes and all of those can respond in a different way, what is this feature called? **1**
(a) Inheritance (b) Overloading
(c) Polymorphism (d) Overriding

viii. How many classes should a program contain to implement the multiple inheritance? **1**
(a) Only 1 (b) At least 1 (c) At least 3 (d) Exactly 3

ix. Which of the following true about FILE *fp? **1**
(a) FILE is a structure and fp is a pointer to the structure of FILE type
(b) FILE is a buffer process
(c) FILE is a keyword in C for representing files and fp is a variable of FILE type
(d) FILE is a stream

x. How exception handling is implemented in the C++ program? **1**
(a) Using Exception keyword
(b) Using try-catch block
(c) Using Exception block
(d) Using Error handling schedules

Q.2 i. Explain the concept of abstraction. **2**
ii. What is the application of object-oriented programming? **3**
iii. What do you mean by procedural oriented programming and object-oriented programming? **5**
OR iv. Explain the basic concept of object-oriented programming. **5**

Q.3 i. What do you mean by class and object? **2**
ii. What do you mean by constructor and destructor with examples? **8**
OR iii. Explain this pointer and constructor overloading. **8**

Q.4 i. What is class relationships in OOP? **3**
ii. What are the different ways to define association in a class? What is the role of multiplicity in class relationships? **7**
OR iii. Explain aggregation and its types. **7**

Q.5 i. What do you mean by static and dynamic polymorphism? **4**
ii. What do you mean by public, private and protected access specifier? **6**
OR iii. Explain Disinheritance with implementation of code. **6**

Q.6 Attempt any two:
i. What do you mean by command line arguments? **5**
ii. Write down a detailed C++ program to demonstrate the use of try, catch, throw and nested try. **5**
iii. Explain the process of open, read, write and close files. **5**

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Marking Scheme
Object Oriented Programming (T) - IT3CO28 (T)

Q.1	i)	c) Platform independent		**1**
	ii)	b) class derived_classname : access base_classname{ /*define class body*/ };		**1**
	iii)	a)Friend Function		**1**
	iv)	b) A constructor to initialize an object with the values of another object		**1**
	v)	c)Is-A		**1**
	vi)	c) Part-Of relationship		**1**
	vii)	c) Polymorphism		**1**
	viii)	c) At least 3		**1**
	ix)	a) FILE is a structure and fp is a pointer to the structure of FILE type		**1**
	x)	b) Using try-catch block		**1**
Q.2	i.	concept	2 Marks	**2**
	ii.	3 application	(1 Mark*3)	**3**
	iii.	POP	2.5 Marks	**5**
		OOP	2.5 Marks	
OR	iv.	Concept	(1 Mark*5)	**5**
Q.3	i.	Class	1 Mark	**2**
		Object	1 Mark	
	ii.	Constructor	4 Marks	**8**
		Destructor	4 Marks	
OR	iii.	This Pointer	4 Marks	**8**
		Constructor Overloading	4 Marks	
Q.4	i.	3 relationships	(1 Mark*3)	**3**
	ii.	Association	4 marks	**7**
		multiplicity	3 marks	
OR	iii.	Aggregation	4 Marks	**7**
		types	3 marks	
Q.5	i.	Static and dynamic polymorphism	(As per explanation)	**4**
		Static polymorphism	2 Marks	
		dynamic polymorphism	2 Marks	
	ii.	Public	2 Marks	**6**
		Private	2 Marks	
		Protected	2 Marks	
OR	iii.	Disinheritance	3 Marks	**6**
		implementation of code	3 Marks	
Q.6	i.	command line arguments	(As per explanation)	**5**
	ii.	Try, catch , throw and nested try.	4 Marks	**5**
		example	1 Marks	
OR	iii.	open,read,write and close files	5 marks	**5**

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