

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER – II • EXAMINATION – WINTER 2016

Subject Code: 2620002**Date:03/01/2017****Subject Name: Object-Oriented Programming Concepts & Programming****Time:02.30 pm to 5.00 pm****Total Marks: 70****Instructions:**

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

- Q.1 (a)** Select most appropriate answer(s) : **07**
- i. Which operator is used to signify the namespace?
 - a) conditional operator
 - b) ternary operator
 - c) scope operator
 - d) none of the mentioned
 - ii. What does your class can hold?
 - a) data
 - b) functions
 - c) both a & b
 - d) none of the mentioned
 - iii. Which exception is thrown by dynamic_cast?
 - a) bad_cast
 - b) bad_typeid
 - c) bad_exception
 - d) bad_alloc
 - iv. By using which of the following the elements in the associate container can be efficiently accessed?
 - a) Key
 - b) Position
 - c) Both a & b
 - d) None of the mentioned
 - v. Which header file is used for reading and writing to a file?
 - a) #include<iostream>
 - b) #include<fstream>
 - c) #include<file>
 - d) None of the mentioned
 - vi. Which of the following concepts means determining at runtime what method to invoke?
 - a) Data hiding
 - b) Dynamic Typing
 - c) Dynamic loading
 - d) Dynamic binding
 - vii. Which of the following concept of oops allows compiler to insert arguments in a function call if it is not specified?
 - a) Call by value
 - b) Call by reference
 - c) Default arguments
 - d) Call by pointer

	(b)	State whether following statements are TRUE or FALSE.	07
		i. Protected variables are only available to the class.	
		ii. Exceptions can be caught and re-thrown.	
		iii. The iostream header file is useful when your program needs to receive key input and print text on the screen.	
		iv. Structure members are private by default.	
		v. A static member function can access only static data members of a class.	
		vi. Virtual function is used to implement late binding.	
		vii. RTTI is also available for non polymorphic classes.	
Q.2	(a)	i. What is a void pointer? Explain void pointer with suitable example.	05
		ii. Give just general syntax of mutable data member.	02
	(b)	i. Write a sort note on data types available in C++.	04
		ii. Give general syntax of local class and Explain The rules considered while using local class.	03
		OR	
	(b)	i. What is a Destructor? Explain Destructor with suitable example.	04
		ii. Write a sort note on Koenig Lookup.	03
Q.3	(a)	What is a Wrapper Class? Explain Wrapper Class with suitable example.	07
	(b)	i. Differentiate Virtual Function and Pure Virtual Function.	03
		ii. Explain Reference Variables as a Return Type with suitable example.	04
		OR	
Q.3	(a)	What is a Template Class? Explain Template Class with suitable example.	07
	(b)	i. Explain Dynamic Binding with suitable example.	03
		ii. What is a namespace? Explain namespace alias with suitable example.	04
Q.4	(a)	Explain type_info object and typeid operator with suitable example.	07
	(b)	List various file modes available in C++. Explain Text and Binary Stream.	07
		OR	
Q.4	(a)	Explain C++ Object Model with suitable example.	07
	(b)	What is a Static Function? Explain Static Function with suitable example.	07
Q.5	(a)	Explain Drawbacks of Exception Handling Approach.	07
	(b)	Write a C++ Program in which Design classes such that they support the following statements:	07
		Feet f1(10.0f),f2;	
		Inch i1;	
		i1 = f1; // converts feet to inches	
		f2 = i1; // converts inches to feet	
		NOTE: Assume 1 Feet = 12 Inches	
		OR	
Q.5	(a)	List Stream classes and its meaning. Compare Old C++ IO vs ANSI C++ IO.	07
	(b)	Explain Principles Behind Design of STL.	07
