Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER – III • EXAMINATION – WINTER 2017

Subject Code: 3630004 **Date: 04-01-2018**

Subject Name: Programming with C++

Time:10.30 am to 1.00 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 of the following is not a type of constructor?
   a) Copy constructor
   b) Default constructor
   c) Friend constructor
   d) Parameterized constructor

iv. Which of the following operators cannot be overloaded?
   a) [ ] (Subscript operator)
   b) ?:; (Ternary operator)
   c) ( ) (Function call operator)
   d) None of the mentioned

v. Which one of the following options is correct?
   a) Friend function can access public data members of the class.
   b) Friend function can access protected data members of the class.
   c) Friend function can access private data members of the class.
   d) All of the above.

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

1

	(b)	State whether following statements are TRUE or FALSE.	**07**

     i. Protected variables are only available to the class.

     ii. It is not possible to achieve inheritance of structures in C++.

     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. C++ never provides a default constructor.

     vii. Each C++ program may have many main functions.

Q.2	**(a)**	i. Explain this pointer with suitable example.	**05**
		ii. Write a general syntax of unnamed namespace.	**02**
	(b)	Write a sort note on data types available in C++.	**07**

<div align="center">OR</div>

	(b)	What is a destructor? Explain destructor with suitable example.	**07**

Q.3	**(a)**	What is a wrapper class? Explain wrapper class with suitable example.	**07**
	(b)	Explain abstract class with suitable example.	**07**

<div align="center">OR</div>

Q.3	**(a)**	What is a template function? Explain template function with suitable example.	**07**
	(b)	Write a sort note on std namespace.	**07**

Q.4	**(a)**	What are multiple inheritances? Explain drawback of multiple inheritances.	**07**
	(b)	What is a namespace? Explain namespace alias with suitable example.	**07**

<div align="center">OR</div>

Q.4	**(a)**	Explain composite object with suitable example.	**07**
	(b)	What is a static function? Explain static function with suitable example.	**07**

Q.5	**(a)**	Explain multimap sorted associative container with suitable example.	**07**
	(b)	Write a C++ program in which design classes such that they support the following statements:	**07**

Dollar d1(10),d2;
Rupee r1;
r1 = d1; // convert dollar to rupees
d2 = r1; // convert rupees to dollar
NOTE: Assume 1 Dollar = 65 Rupees

<div align="center">OR</div>

Q.5	**(a)**	Write a sort note on local class.	**07**
	(b)	Explain principles behind design of STL.	**07**

<div align="center">*************</div>