

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 715301

Date: 08-01-2013

Subject Name: Advanced Object Oriented Programming

Time: 02.30 pm – 05.00 pm

Total Marks: 70

Instructions:

1. Attempt question 1 which is compulsory and answer any four from the rest questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right hand indicate the marks.

Q. No. 1

- a. List out salient features of XML. Briefly discuss about each of them. [7 Marks]
- b. Java is platform independent language. Do you agree on this statement? Justify with the concept of byte code and give example. [7 Marks]

Q. No. 2

- a. Write a program code to illustrate constructors in multilevel inheritance. [6 Marks]
- b. What is the use of static variables, static methods? Also explain the concept of static initializer block. [8 Marks]

Q. No. 3

- a. Explain the concept of constructor and copy constructor with suitable example. [8 Marks]
- b. List out the principles of Object Oriented Programming and explain briefly how java supports the same. [6 Marks]

Q. No. 4

- a. Explain access control rules with respect to derived, non derived classes from same package and other packages in a tabular form. [8 Marks]
- b. What is an interface and how a class can inherit from an interface, explain with an example. [6 Marks]

Q. No. 5

- a. Explain java object model with respect to life time and storage of simple variables, arrays, references and user defined objects. [8 Marks]
- b. Give an example for nested try-catch block and explain the concept of re-throw. [6 Marks]

Q. No. 6

- a. What are the two ways of creating threads? Explain with suitable example code. [8 Marks]
- b. Explain the concept of method overloading with suitable examples. [6 Marks]

Q. No. 7

- a. Discuss in detail the concept of dynamic method dispatch with respect to overridden methods in sub classes. [7 Marks]
- b. Java is an internet friendly language. Justify the statement with your discussion. [7 Marks]

Q. No. 8

- a. List out and explain the differences between HTML & XML. [6 Marks]
- b. Explain the following design patterns with sample code [8 Marks]
 - i. Factory methods
 - ii. Singleton
