Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA Integrated - SEMESTER–III • EXAMINATION – SUMMER • 2015

Subject Code: 4430601 **Date: 02-05-2015**

Subject Name: Java Programming

Time: 02:30 pm to 05:00 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)** Write down various features of Java programming language. **07**

(b) Answer the following:-

(i) Explain reference data types in java. **04**

(ii) Write down the use of final, static, instanceof keywords. **03**

Q.2 **(a)** Differentiate between following

(i) Abstract class and interface **03**

(ii) Variable shadowing and variable binding **02**

(iii) Initializer block and class initializer block **02**

(b) Write down various types of inheritance available in java and also explain how java achieves multiple inheritance. **07**

OR

(b) Explain various access specifiers and their accessibility within class, within package, within sub class outside package and non sub class outside package. Also write down the steps to create package. **07**

Q.3 **(a)** Differentiate between following **07**

(i) Checked and unchecked exception

(ii) throw and throws

(b) Answer the following:

(i) What is enum type in java and explain various features of enum introduced in latest versions of java. **03**

(ii) Explain collection framework in brief? What is the role of iterator in collection? **04**

OR

Q.3 **(a)** Differentiate between following

(i) Local class , anonymous class and nested class **05**

(ii) Return and throw statement **02**

(b) Answer the following:

(i) How can we create custom exception? Explain it with the help of suitable example. **04**

(ii) How can we pass variable number of arguments in a method? Explain it with the help of suitable example. **03**

Q.4 **(a)** Explain life cycle of thread with the help of suitable diagram and name various methods used for each state of thread. **07**

(b) Write short note on **07**

(i) Synchronization

(ii) Buffered stream

OR

Q.4	**(a)**	Explain four top-level stream classes from the java.io package.	**07**
	(b)	Write short note on (i) Daemon Threads (ii) Filter stream	**07**
Q.5	**(a)**	Create a class called Emp {eid, ename} along with all possible constructors, getter, and setter methods and also create suitable GUI using frame which can include two labels, two textfields and a button. When user click on the button , data should be stored in file in the form of object.	**07**
	(b)	Write short note on (i) Event delegation model (ii) Container class	**07**

OR

Q.5	**(a)**	Create an applet which displays the text in the center of applet. The name and color should be passed as parameter for displaying text and setting background color.	**07**
	(b)	Write short note on (i) Layout Manager (ii) Adapter class	**07**

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