Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME- SEMESTER II– EXAMINATION – SUMMER 2015

Subject Code: 2720215 **Date: 03/06/2015**

Subject Name: OOP WITH JAVA

Time: 2:30 PM – 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)**	Answer the following: i) Compare methods and constructors with example in java. ii) Compare 'this' and 'super' keywords.	**07**
	(b)	Answer the following: i) Discuss multilevel inheritance with an example in java. ii) What is function overloading? Demonstrate it with an example.	**07**
Q.2	**(a)**	What do you mean by exception in java? Show following with example: i) Nested try statements, ii) For single try, multiple catch clauses.	**07**
	(b)	Discuss following functions with example of each, with respect to String class: i) substring ii) replace iii) length iv) compareTo	**07**
		OR	
	(b)	Write function (with proper syntax) for the following tasks: i) To convert String to equivalent Integer ii) To convert Double to equivalent String iii) To concatenate two Strings iv) To remove trailing and leading spaces from the String	**07**
Q.3	**(a)**	i) Discuss various wrapper classes. ii) Differentiate Interface and Abstract class	**07**
	(b)	What is Delegation Event Model? Explain the Java event handling with appropriate example.	**07**
		OR	
Q.3	**(a)**	What are threads? Explain the differences between a thread and a process. Describe two possible ways to create threads in Java.	**07**
	(b)	Discuss private, default, protected and public access of class members for different cases.	**07**
Q.4	**(a)**	Write a program that reads from a file, calculate the number of bytes read and write this number (length of file) to another file.	**07**
	(b)	How Java applet program differs from the normal standalone application? Explain life cycle of Applets.	**07**
		OR	

Q.4 **(a)** Write a program to demonstrate the use of following methods: **07**

mark (int readAheadLimit)
boolean markSupported()
void reset()

(b) Explain <APPLET> tag. Explain parameter passing to APPLET with example. **07**

Q.5 **(a)** Discuss Synchronization process in multithreading. Demonstrate its usage with a small example. **07**

(b) Answer the following: **07**

i) Enlist various possible states of a thread.
ii) What is method overriding?

OR

Q.5 **(a)** Define concept of streams. What are the types of streams. Explain in brief different classes of stream. **07**

(b) A class **Employee** contains employee details and another class Salary calculates the employeeôs net salary. The details of the two classes are given below: **07**

Class Name	**:**	**Employee**
Data Members		
empNo	:	Stores the employee number (numeric)
empName	:	Stores the employee name (alpha numeric)
empDesig	:	Stores the employee designation (alpha numeric)
Member Functions		
Employee( )	:	Default constructor
Employee(. . .)	:	Parameterized constructor to assign value to employee number, name and designation
void display( )	:	Display the employee details

Class Name	**:**	**Salary**
Data Members		
basic	:	to store the basic pay (double / float)
Member Functions		
Salary(é)	:	Parameterized constructor to assign values to data members
void calculate( )	:	Calculate the employeeôs net salary according to following rules: DA = 10% of basic HRA=15% of basic Salary=basic+DA+HRA PF=8% of Salary NetSalary = Salary ï PF Display the employee details and the Net Salary

Specify the class 'Employee' giving details of the constructors and member function void display(). Using concept of INHERITANCE specify the class 'Salary' giving details of constructor and the member function void calculate(). The main function need not require to write.

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