Seat No.: _____   Enrolment No._____

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

Subject Code: 630002   **Date: 06-01-2018**

Subject Name: Fundamentals of Java Programming (Java)

Time: 10:30 am to 01:00 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 questions	**07**
		(i) Does the name of the file have to match the public class name? (Yes/No)	
		(ii) Collection is an interface. (True / False)	
		(iii) Is garbage collector thread a daemon thread? (Yes / No)	
		(iv) Is Runnable a class or an interface?	
		(v) Can multiple references point to a single instance? (Yes / No)	
		(vi) What is the name of the base class of all AWT components?	
		(vii) Which class should be extended to create an applet?	
	(b)	Explain why is Java popular with appropriate reasons.	**07**
Q.2	**(a)**	i) Write a program to illustrate usage of command line arguments.	**04**
		ii) Explain the usage of javac and java commands with example.	**03**
	(b)	Explain all the unary and binary arithmetic operators with appropriate examples.	**07**
		OR	
	(b)	Explain all the bitwise operators with appropriate examples.	**07**
Q.3	**(a)**	Explain the usage of if-else statement and switch statement using code snippets.	**07**
	(b)	Explain the use of instance variables, instance methods, constructor and initializer block with appropriate example.	**07**
		OR	
Q.3	**(a)**	Explain do while, while and for loop statements.	**07**
	(b)	Draw the hierarchy diagram of top level exception classes. Differentiate between checked and unchecked exceptions.	**07**
Q.4	**(a)**	What is the significance of Collection framework? Discuss the Set and List interfaces with example.	**07**
	(b)	What is a thread? Explain the steps of creating a thread using Thread class.	**07**
		OR	
Q.4	**(a)**	Explain the purpose of InputStream, Reader, OutputStream and Writer classes.	**07**
	(b)	i) Explain the different states of a thread	**04**
		ii) Explain what is a daemon thread. Give one example of a daemon thread.	**03**
Q.5	**(a)**	Explain at least 5 method of the AWT Component class.	**07**
	(b)	What is an applet? Explain the life cycle methods of an applet.	**07**
		OR	
Q.5	**(a)**	Explain the event delegation model of Java.	**07**
	(b)	What is an annotation? Explain annotation element names and its usage.	**07**

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