

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA Integrated- SEMESTER– III EXAMINATION – WINTER 2019****Subject Code: 4430601****Date:26/11/2019****Subject Name: Java Programming****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)** Do as directed.
1. Write java code to create array with 2 cells in first row, 3 cells in second row and five cells in third row. **02**
 2. List uses of various types of comments available in Java. **02**
 3. How local class is used? **03**
- (b)** Do as directed.
1. Can we run java program on any platform? Explain in details. **04**
 2. How break and continue differ? Explain with example. **03**
- Q.2 (a)** Explain Math class, List and Map interfaces in short. **07**
- (b)** Why do we need constructor? Explain various types of constructor with example. **07**
- OR**
- (b)** Why do we require method overloading? Explain with example. **07**
- Q.3 (a)** What is inheritance? Explain various types of inheritance in short. **07**
- (b)** What is abstract class? What care should be taken during inheritance of abstract class in to other class? Explain with example. **07**
- OR**
- Q.3 (a)** How the super keyword is used in java. Explain with example. **07**
- (b)** What is exception? Explain checked and unchecked exception in details. **07**
- Q.4 (a)** What is stream? Explain various stream classes available in java. **07**
- (b)** Explain random access file in java with proper example. **07**
- OR**
- Q.4 (a)** What is thread? Explain various states of thread. **07**
- (b)** What is applet? Explain various tags of applet with example. **07**
- Q.5 (a)** Explain the following in short:
1. MVC **03**
 2. Swing **04**
- (b)** Explain various methods of Graphics class with example. **07**
- OR**
- Q.5 (a)** What is adapter class? Create your own adapter class for any two listeners. **07**
- (b)** Write java code for GUI - Calculator with appropriate layout and +, -, * and / operations. **07**
