

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER– III• EXAMINATION – WINTER 2016

Subject Code:2630002

Date:09/01/ 2017

Subject Name: FUNDAMENTALS OF JAVA PROGRAMING (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)
1. What are the features of java programming language? **02**
 2. What is an abstract class? What is its need? **02**
 3. What is the purpose of finalize () method? **02**
 4. How would you define a group of constants that will be used by many classes? **01**
- (b) What is the purpose of following java keywords?
this, static, super, final, synchronized, throws, enum **07**
- Q.2**
- (a)
1. Can an interface reference variable refer to an object which implements that interface? When would you like to do it? Explain with an example. **03**
 2. What is the difference between “initialize” and “class-initializer” block? Explain with example code. **04**
- (b)
1. How does Java support the use of irregular array? **02**
 2. What are the three methods using which a running thread may be brought to suspended state? **02**
 3. What will be printed out if this code is run with the following command line? **03**
- ```
java myprog good morning
public class myprog{
 public static void main(String argv[])
 {
 System.out.println(argv[2]);
 }
}
```
- a) myprog  
b) good  
c) morning  
d) Exception raised: "java.lang.ArrayIndexOutOfBoundsException: 2"

**OR**

- (b)
1. What are the daemon threads? **02**
  2. What is Serializable? When it is used? **02**
  3. What is the output of following code? **03**
- ```
String s1 = "Welcome to Java";
String s2 = s1.replace("to", "2");
System.out.println(s1);
System.out.println(s2);
```
- a) Compile time error
b) Compiles but gives run time error
c) prints "Welcome to Java"
d) prints "Welcome 2 Java"

- Q.3 (a)** 1. What is constructor? Explain the use of parameterized constructor with suitable example. **03**
2. What do you mean by dynamic method dispatching? Explain it by giving an example. **04**
- (b)** 1. Which keywords are used to handle exceptions? Write a java program to explain the use of “throw” keyword. **03**
2. What do you mean by customized exception? Explain it with an example. **04**

OR

- Q.3 (a)** 1. Which is the super class of every class in java? List out its important methods and explain any one of them. **03**
2. What are the different access specifiers? Write a java program to demonstrate these. **04**
- (b)** 1. What are checked and unchecked exceptions? Give examples of each. **03**
2. Write a java program which generates an exception if negative number is given as an argument to method being called. **04**

- Q.4 (a)** 1. What are the wrapper classes? Explain the use of it by giving an example. **03**
2. What is the purpose of “Pattern” and “Matcher” classes? List out their important methods. **04**
- (b)** Write a java program that stores ten integer values in the file. Program should read these values from file and find largest value among them. **07**

OR

- Q.4 (a)** 1. Differentiate “Comparable” interface with “Comparator”. **03**
2. List out the important methods of “Collection” and “Iterator” interface. **04**
- (b)** Write a java program to search the file named the word entered as a filename from command line; if it exists in the system then program should print the content of a file on console. **07**

- Q.5 (a)** 1. Differentiate “AWT” with “SWING” components. **03**
2. What is an Applet? List out and explain life cycle methods of it. **04**
- (b)** Write an applet and a Webpage, where the Web page should have two separate frames, one containing the applet and the other in which another Web page may be shown. The applet should have a text field to accept a URL, and it should display the corresponding Web page in the other frame. **07**

OR

- Q.5 (a)** 1. What is MVC? Are Swing components based on MVC? Justify your answer. **03**
2. What are the adapter classes? Explain the use of it with an example. **04**
- (b)** What do you mean by event- handling? Write a Java program to demonstrate Mouse events. **07**
