

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-III • EXAMINATION – SUMMER- 2017

Subject Code: 3630005

Date: 07-06-2017

Subject Name: Programming with Java

Time: 02:30 pm - 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)** State which of the following are true or false. Justify your answer. **07**
- i) Object is an instance of a class.
 - ii) The size of char data-type is 2 byte in java.
 - iii) The default case is required in the switch selection structure.
 - iv) Java source code can be written in files with any extension.
 - v) “final” variables cannot be modified.
 - vi) An abstract class must have at least one abstract method.
 - vii) One class cannot be derived from more than one class in java.
- (b)** i) Differentiate String and StringBuffer classes. **04**
- ii) What is the difference between final method and ordinary method of a class? **03**
- Q.2 (a)** Discuss initializer blocks and class initializer blocks. **07**
- (b)** 1. What is the difference between “Pass by value” and “Pass by reference” in java? Explain with proper example. **04**
2. Explain “Array of Reference Type” using java code. **03**
- OR
- (b)** 1. What is the use of following java keywords? **04**
- static, final, protected, public
2. Define any three features of object oriented programming language. **03**
- Q.3 (a)** What is Package? State the steps to create and import a package with required java program code. **07**
- (b)** Explain importance of Constructor. Discuss the overloading of methods and constructors with suitable java program code. **07**
- OR
- (a)** Define interface. How does it overcome the problem of java’s multiple inheritance? **07**
- (b)** What is an Exception? Explain exception handling with example. **07**
- Q.4 (a)** Discuss any five classes of Collection with java program code. **07**
- (b)** Briefly discuss enum type giving an example. **07**
- OR
- (a)** Explain formatter and scanner class with example. **07**
- (b)** What is collection framework? Discuss Map interface with example. **07**
- Q.5 (a)** Explain InputStream class, OutputStream class, Reader class and Writer class with suitable java code. **07**
- (b)** Explain Thread life cycle with diagram. **07**
- OR
- (a)** What is Thread? How thread is created in Java? Explain with example. **07**
- (b)** Explain about synchronization of the thread with suitable example of java program code. **07**
