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Total Number of Pages: 02

M.Sc.I
FBEF512

5th Semester Back Examination 2017-18

Java Programming

BRANCH: M.Sc.I(MC)

Time: 3 Hours

Max Marks: 70

Q.CODE : B605

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

- Q1 Answer the following questions: (2 x 10)**
- a) Java is called "Write Once and Run Anywhere" kind of programming language. Explain.
 - b) Why main() is public and static in java?
 - c) What is the difference between error and exception?
 - d) What is the difference between final and finally keywords in java?
 - e) Define daemon thread.
 - f) What is the difference between throw and throws?
 - g) What is dynamic method dispatching in Java?
 - h) What do you mean by Autoboxing and Unboxing, explain with example?
 - i) What is the output of the following program with justification?
class A {
public int Result (int a, int b) { return (a>b? a : b); }
}
public class Test {
public static void main(String args[]) {
A ob = new A();
System.out.println("x = " + ob.GetResult(0, 1));
}
}
 - j) What is the use of static keyword?
- Q2 a) What is the difference between procedural and Object Oriented programming language. Define all the features of OOP with example. (5)**
- b) Briefly explain about all the characteristics of Java programming language. (5)**
- Q3 a) What is Polymorphism? Explain the difference between static and dynamic polymorphism. Give examples of method overloading and method overriding. (5)**
- b) What is inheritance? Explain with example. (5)**
- Q4 a) Explain Array of Objects. Write a program to define a class Student with variables like roll_no, student_name and branch. Define a constructor to initialize variables and a method displayStudentInfo() to display details. Take details of 10 students using an array of Student class Objects. (5)**
- b) What is the difference between Checked Exception and unchecked Exception? Write a java program to create your own exception which checks divisibility by Zero and handle the exception? (5)**

- Q5** a) What is super keyword and why it is used? Write a java program to find out cost, weight and volume of a square box using multilevel inheritance and use super keyword at proper places? **(5)**
- b) Write a Java program to take an array and calculate sum of all even and odd elements separately and display the evensum and oddsum. **(5)**
- Q6** a) What is JDBC? Explain in detail about different types of JDBC drivers. **(5)**
- b) What is a package? How it is used in programming? Signify the use of different API packages. **(5)**
- Q7** a) What is thread synchronization? What are the different ways of thread synchronization? Write a java program to explain synchronized method. **(5)**
- b) What is stream in java? Define and differentiate between types of streams used in java. Write a java program to copy the content of one file to another file using character stream classes. **(5)**
- Q8** **Write short notes on any TWO :** **(5 x 2)**
- a) Life cycle of Thread
 - b) Interface
 - c) Encapsulation
 - d) Abstract class