

MANIPAL UNIVERSITY**FIRST SEMESTER ME (MEDICAL SOFTWARE) DEGREE EXAMINATION – NOVEMBER 2015****SUBJECT: MMS 613 – DATABASE PROGRAMMING IN JAVA**

Friday, November 20, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

1. Distinguish between the following terms:
 - 1A. Objects and classes
 - 1B. Data abstraction and data encapsulation
 - 1C. Inheritance and polymorphism
 - 1D. Dynamic binding and message passing

(2½ marks × 4 = 10 marks)
2. Why do we say that Java works on the “Write once, Run anywhere” principle? Explain in detail how this is achieved.

(10 marks)
3. List and explain different iteration statements available in java.

(10 marks)
- 4A. Explain the use of keyword **super** with an examples.
- 4B. Explain the Inner classes concept in Java.

(5+5 = 10 marks)
5. **Define the following:**
 - 5A. Abstract class
 - 5B. Multilevel Inheritance
 - 5C. Dynamic method dispatch
 - 5D. Method overriding

(3+2+3+2 = 10 marks)
- 6A. What do you mean by exception? What are the difference between Checked and Unchecked Exceptions?

(1+2 = 3 marks)
- 6B. Explain in details the different ways of handling the exception in Java.

(7 marks)

7. List and explain the characteristics of database approach.

(10 marks)

8. Explain in detail the steps involved in Database design process.

(10 marks)

9A. What is a database transaction? Explain it with an example.

9B. Explain the following API's:

- i) Connection
- ii) Statement

(5+5 = 10 marks)

10A. Write a short note on Nested Queries.

(4 marks)

10B. Write a short note for following terms:

- i) Views
- ii) GROUP BY clause

(3 marks × 2 = 6 marks)

