Reg. No. ☐☐☐☐☐☐☐☐☐☐

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL

II SEMESTER M.C.A.
END SEMESTER EXAMINATION – APR/MAY 2017
(REVISED CREDIT SYSTEM)

SUBJECT: ADVANCED JAVA PROGRAMMING [MCA 4201]

20-04-2017

Time : 3 hours   Max. Marks : 50

Instructions to Candidates

1. Answer ALL questions.
2. Missing data may be suitably assumed.

1A   What is a listIterator? Write the syntax of *hasNext* () and *next* () methods of the listIterator interface and explain them. Illustrate with a suitable example.   5

1B   What is the difference between *mkdir*() and *mkdirs*() methods of File class? Illustrate them for the file path "/dir1/dir2/dir3".   3

1C   What is a socket? What are the components of a socket address? Explain.   2

2A   Which classes are used for data communication using TCP? Explain, with an example, the relevant methods and steps used for this.   5

2B   What is a ResultSet? What are the two ways of retrieving data from the ResultSet? Explain with an example.   3

2C   What is the difference between *indexOf* () and *lastIndexOf* () methods of String class? Given the string s = "Manipal University", write the values of m and n obtained after executing the statements int m = $s.indexOf$ ("it") and int n = $s.lastIndexOf$ ("ni").   2

3A Explain the purpose of FileReader and FileWriter classes. Write the syntax of read()   5
and write() methods of these classes and explain their working. Illustrate, with an
example code, the method of using these classes to transfer the contents of the text file
"input.txt" to another text file "output.txt".

3B Explain with syntax, the getEchoChar() and setEchoChar() methods of TextField   3
class. What is the method in Swing that works like AWT Textfield with echo character
set?

3C Write the syntax of the *service*() method of javax.servlet.Servlet interface and explain   2
its purpose.

4A What is a package? Explain with an example, the private, public and protected access   5
specifiers used with members of a class in a package.

4B Explain with syntax, the working of a 'enhanced' for loop. Write an 'enhanced' for   3
loop to find the sum of the elements of an array of integers.

4C What is the difference between *sleep*() and *wait*() methods with reference to threads?   2

5A Compare and contrast overloading and overriding of methods. Explain with suitable   5
examples.

5B Explain the difference between checked and unchecked exceptions? Specify the   3
category to which the following exceptions belong:
   (a) NumberFormatException
   (b) ArithmeticException.

5C What do you mean by autoboxing? Explain with an example.   2