

Reg. No.



Manipal Institute of Technology
(Constituent Institute of Manipal University)
Manipal – 576 104



FOURTH SEMESTER M. C. A. (Lateral) END SEMESTER EXAMINATION – MAY 2014
SUBJECT: ADVANCED JAVA PROGRAMMING (MCA 582)

06-05-2014

Time : 3 hours

Max. marks : 50

Instructions to Candidates

1. Answer any 5 FULL questions.
2. All questions carry equal marks.
3. Assume missing data, if any. Mention the same.

- 1A What do you mean by a labeled loop? Explain the working of labeled break and labeled continue statements, with an example each.
- 1B Explain the use of access specifiers *public*, *protected* and *private*, with reference to a package.
- 1C What is the difference between *removeElement()* and *removeElementAt()* methods of Vector class? Given the vector $V = [4, 6, 2, 8, 5, 7, 5, 3]$, write the resulting vectors after executing the statements *removeElement(5)* and *removeElementAt(4)*.

(5 + 3 + 2)

- 2A Compare and contrast overloading and overriding of methods. Explain with suitable examples.
- 2B What is the special feature of StringBuffer class? Illustrate with an example.
- 2C What is purpose of *finally* block in exception handling? Explain.

(5 + 3 + 2)

- 3A Explain the constructors of `RandomAccessFile` class, with syntax and examples. Also, explain the method of this class which makes random access possible.
- 3B What is an iterator? Explain, with syntax and example, the `next()` and `hasNext()` methods of Iterator interface.
- 3C Differentiate between `equals()` method and `==` operator of `String` class. Given the declarations
String s1 = "Hello" and String s2 = new String(s1)
what will be the result of executing the following statements?
s1.equals(s2) and s1 == s2

(5 + 3 + 2)

- 4A What is the use of `LinkedList` class? Differentiate between the following pairs of methods of this class:
i. `addFirst()` and `offerFirst()`
ii. `removeLast()` and `pollLast()`
- 4B What is the difference between `mkdir()` and `mkdirs()` methods of `File` class? Illustrate them for the file path `/dir1/dir2/dir3`.
- 4C Define the terms *socket* and *port number*. How they are related?

(5 + 3 + 2)

- 5A What is the use of a buffered stream? Explain the method of using `BufferedInputStream` and `BufferedOutputStream`. Illustrate with suitable example.
- 5B How do you define and generate user-defined exception? Give an example.
- 5C What is the difference between `sleep()` and `wait()` methods with reference to threads?

(5 + 3 + 2)

- 6A How do you use TCP/IP sockets for communication of data over a network? Explain the relevant steps with an example.
- 6B What are command line arguments? How they can be used in a program? Give an example.
- 6C What is the purpose of Swing Component classes `JLabel` and `JFrame`? Explain.

(5 + 3 + 2)
