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13MCA32

Third Semester MCA Degree Examination, June/July 2018
Programming using Java

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1** a. What are the different primitive data types available in java? Explain each with declarations ranges and examples. (12 Marks)
- b. Explain rules to be followed while creating an identifier. Also give some examples while explaining different kinds of literals. (08 Marks)
- 2** a. What is a constructor? Explain different kinds of constructors with example code. (10 Marks)
- b. What are different kinds of looping statements available in java? Explain with example code. (10 Marks)
- 3** a. Explain how each bitwise operator works in java using code example. (10 Marks)
- b. Write a java program to perform different operations on strings :
 i) length ii) uppercase iii) to find substring iv) to compare 2 strings v) to find if 2 strings are equal vi) to change to characteristics array. (10 Marks)
- 4** a. Explain different kinds of access specifiers available in java with code example. (08 Marks)
- b. Explain how "super" keyword works for a variable and method in inheritance. (04 Marks)
- c. Write a program to demonstrate inheritance in multi-level hierarchy. (08 Marks)
- 5** a. Explain how access specifiers work when used in packages. (10 Marks)
- b. Explain how multiple interfaces are implemented in java. Also how is an interface reference used while coding. Explain with example. (10 Marks)
- 6** a. Explain important keywords in exception handling. Explain with example how we can create our own exception class. (10 Marks)
- b. What are the two ways in which you can create a thread? Explain by providing example for each. (10 Marks)
- 7** a. Explain with code example, what is enumeration. Explain how constructors and methods can be created inside it. (10 Marks)
- b. Explain with code example, important methods of applets. (10 Marks)
- 8** Write short notes on .
- a. Layout managers
- b. Networking classes and interfaces
- c. Collection classes and interfaces
- d. Swing controls. (20 Marks)

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VTU/9/7/3/2018

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.