



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Third Semester - Master of Computer Applications (MCA)

Semester End Examination; Dec. - 2015

Programming Using JAVA

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

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|---|----|--|----|
| 1 | a. | Explain why Java language is called platform independent language. | 5 |
| | b. | Explain in detail the first simple program of Java. | 5 |
| | c. | Write a Java program to show the different types of type conversion in Java. | 5 |
| | d. | Explain break and continue statements with an example. | 5 |
| 2 | a. | Explain the scope and life time of variables in Java with suitable examples. | 10 |
| | b. | What are byte codes? Explain the key attributes of OOP. With example for each. | 10 |

UNIT - II

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|---|----|--|----|
| 3 | a. | What is a reference variable? Write a Java program to find the area of a circle using parameterized constructor with returning value method. | 10 |
| | b. | Differentiate between method overloading and constructor overloading with example program. | 10 |
| 4 | a. | Write a java program to search for a given key using linear search on integer list of items (use forecasts style of loop). | 8 |
| | b. | Explain different uses of static key word in Java with an example program. | 12 |

UNIT - III

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|---|----|--|----|
| 5 | a. | Differentiate between abstract class and interface with an example program. | 10 |
| | b. | What are the uses of creating packages? Explain with an example. | 10 |
| 6 | a. | What are exceptions? Write a Java program that demonstrates the throwing of any 3 built – in exceptions using the keyword ‘throw’. | 10 |
| | b. | With an example program, explain different uses of final keyword in Java. | 10 |

UNIT - IV

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|---|----|---|----|
| 7 | a. | Write a Java program to create multiple threads each performing different functionalities (minimum 2 sub threads along with main thread). | 10 |
| | b. | Explain boxing and un-boxing in Java with an example program to demonstrate the same. | 10 |

- 8 a. Give the functionalities of the following: 5
 - i) notify() ii) wait() iii) notifyALL() iv) values() v) valueOf()
- b. Write a Java program to demonstrate the use of synchronized statement. 7
- c. Define the following with example : 8
 - i) Generic data type ii) Enumerations
 - iii) Annotations iv) Thread priority.

UNIT - V

- 9 a. Write a Java program to demonstrate how to pass parameters to applets. 10
- b. Explain socket class with an example program to demonstrate use of socket class method(s). 10
- 10 a. Write a Java program to demonstrate any three swing components usage. 10
- b. Explain applet skeleton. 5
- c. Write a note on URL connection class. 5

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