

Duration:- 2 1/2 Hrs.

S4IT - Core Java.

Marks:- 75

- Note:- 1) All questions are compulsory.
2) Figures to the right indicate maximum marks.

1. Attempt any three of the following:

15

- a. What is Java Virtual Machine (JVM)? Explain JVM components.
b. Define Identifier. Explain rules for identifiers in java.
c. What are the primitive data types in java? Briefly explain their size, range and other Details.
d. List of and explain any five features of java.
e. Explain the following methods of String.
(i) length() (ii) equals() (iii) charAt() (iv) compareTo() (v) substring()
f. How is main() method of java written? Explain it in detail.

CO1 - (R)
CO1 - (RU)
CO1 - (R)
CO1 - (R)
CO2 - (U)
CO2 - (R)

2. Attempt any three of the following:

15

- a. When do we use switch-case statement? Explain it with example.
b. Write a short notes on access specifiers in java.
c. What is a Constructor? Explain characteristics of Constructor.
d. Write a comparative note on overloading and overriding in java.
e. What do you mean by variable arguments? Explain it with example.
f. When do we use 'foreach' loop? Explain it with example.

CO1 - (R)
CO2 - (U)
CO3 - (R)
CO3 - (E)
CO1 - (RA)
CO1 - (R)

3. Attempt any three of the following:

15

- a. Differentiate between classes and Interfaces.
b. What is a package? Write steps to create a package in java.
c. What is an interface? How can we implement interface in a class?
d. Explain the following with example.
(i) this (ii) super
e. Write a program to illustrate the concept of abstract method and abstract class.
f. Write a program to implement multilevel inheritance with default constructor in each Class.

CO3 - (E)
CO4 - (R)
CO3 - (RA)
CO3 - (EA)
CO3 - (A)
CO3 - (A)

4. Attempt any three of the following:

15

- a. Write a short note on Exception handling.
b. Explain life cycle of a Thread.
c. Define Stream. Explain how we can write binary data to a file.
d. What are the different ways of creating a new Thread in java.
e. Explain the difference between the following using a suitable example.
i) equals() , ii)compareTo() , iii>equalsIgnoreCase()
f. Explain the use of Enumeration datatype in java.

CO1 - (U)
CO3 - (U)
CO3 - (RU)
CO3 - (R)
CO3 - (E)
CO1 - (U)

5. Attempt any three of the following:

15

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| a. Create an applet to display “Java World”, Change the text color to Red. | CO4 - (A) |
| b. What is the use of LayoutManager? Explain GridLayout and BorderLayout. | CO3 - (U) |
| c. Explain the following Listener interfaces
(i) KeyListener (ii) MouseListener | CO3 - (U) |
| d. Explain Checkbox class along with its constructors in detail. | CO4 - (U) |
| e. Design an AWT program to print the factorial of an input value. | CO3 - (A) |
| f. What is the use of Adapter classes? Explain any one Adapter class in detail. | CO3 - (RU) |
