

## SUMMER-2014

### UNIT 1

**Q.1 a)** What is an operator and explain the different types of operators. (7)

**b)** Write a simple Java application to compute the area of circle whose diameter is 10 cm, and explain each statement in program. (6)

**Q.2 a)** Explain JVM and the importance of JVM in JRE. (7)

**b)** Write a java program that calculates sum of first 20 odd numbers. (6)

### UNIT 2

**Q.3 a)** Describe the difference between object declaration and object creation. Show a state-of-memory diagram after each of these statements in executed. `Person person1, Person2;`

```
Person1 = new person ( );
```

```
Person2 = new Person ( );
```

 (7)

**b)** What is an array? Explain different types of array with an example. (6)

**Q.4 a)** Differentiate between Instance Variable & Class Variables. (6)

**b)** Create a class student having data members name, Roll No. and branch of a student. Also declare the two methods i.e. `getdata( )` and `display ( )` for taking the input and display the same. Write a complete java code for display the information of a single student. (7)

### UNIT 3

**Q.5 a)** Explain the following terms with example:

i) Final method and final class

ii) Abstract method and abstract class. (8)

**b)** What is enum type? Explain with the help of a program. (6)

**Q.6 a)** What is inheritance? Explain different types of inheritance in detail. (7)

**b)** What are packages? How are they created? Illustrate with an example. (7)

#### UNIT 4

**Q.7 a)** Explain the following terms:- (6)

i) try                      ii) catch    iii) throw              iv) throws              v) finally

**b)** Write a java program to write character stream to a file using `fileWriter`. (7)

**Q.8 a)** List out the various methods associated with `file` object and explain each of them in brief. (6)

**b)** Write a java program to read data to a file using `FileInputStream`. (7)

#### UNIT 5

**Q.9 a)** What is Applet? How does it differ from application? Explain life cycle of Applet? (7)

**b)** Write an applet that draws a circle, a line, an arc and a polygon inside the applet's visible area. (6)

**Q.10 a)** Explain `graphic` class and `color` class in detail and also with its constructors and methods. (6)

**b)** Explain the life cycle of an applet. And explain applet tag in detail. (7)

#### UNIT 6

**Q.11 a)** Explain the following:

i) `Mouse Motion Listener`,                      ii) `Window Listener`,  
iii) `Action Listener interface`              iv) `Key listener` (6)

**b)** Write simple applet using `lable`, `textfield` and `button` GUI objects, when the user click on the button, applet display the area of square. (7)

**Q.12 a)** Write a simple applet to implement all the methods of mouse listener and mouse motion listener. **(7)**

**b)** Write a temperature conversion program that converts the temperature Fahrenheit to Celsius. The Fahrenheit temperature should be entered through keyword via textfield. A textfield should be display the converted temperature. Use the following formula.

$$\text{Celsius} = 5/9 * (\text{Fahrenheit} - 32) \quad \mathbf{(7)}$$

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