2018

M.C.A.

MCA: 3.4

OBJECT ORIENTED PROGRAMMING AND DESIGN

Full Marks: 75

Time: 3 Hours

1. Answer ALL questions from the following (question carries ONE mark each.):   **1x5=5**
   1. What are attributes?
   ii. What is a method?
   iii. Why is Java known as platform neutral language?
   iv. What is initialization?
   v. What are instance variables?

   Answer ANY 4 (FOUR) questions from the following (question carries FIVE marks each.):   **5x4=20**

2. Determine the value of each of the following logical expressions in True or False, if a=5, b=10 and c= -6.   **1x5**

   i   a>b&&a<c
   ii   a==c II b>a
   iii a<b&&a>c
   iv   b>15&&c<0 IIa>b
   v   (a/2.0==0.0&&b/2.0!=0.0) IIc<0.0

3. Write a program in java to achieve Multiple Inheritance.
4. How Java Stand Alone applications and Web Applets are executed, explain.   2.5+2.5

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5. Explain Conditional Operator with an example.
6. What are Data Types? Describe the Built-In data types in Java.

$$2.5+2.5$$

7. Write a program in java to illustrate various Constructors.

Answer ANY 5 (FIVE) questions from the following (question carries TEN marks each.): **10x5=50**

8. Describe the Basic concepts of Object Oriented Programming.
9. Differentiate between Method Overloading and Method Overriding with examples. 5+5
10. Describe Sequence Diagram, draw a sequence diagram for a session with an online stock broker. 5+5
11. Explain Class model, State model and Interaction model used in Object Oriented Modeling and Designing, and the relationship among them.

9+1

12. Explain how Nesting of If....Else statement using a flowchart and then write a program in Java to demonstrate it. 5+5
13. Draw a State diagram showing the Nested states for a telephone line with composite state name, transitions and activity.
14. What is Exception, how it can be handled. Write a program in Java Using Try and Catch for Exception Handling. 2+3+5

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