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BICS-035

**DIPLOMA - VIEP - COMPUTER SCIENCE AND
ENGINEERING (DCSVI)**

00587 **Term-End Examination**

December, 2017

**BICS-035 : JAVA BASIC AND OBJECT MODELING
DESIGN**

Time : 2 hours

Maximum Marks : 70

Note : Question no. 1 is compulsory. Attempt any four questions from the rest. All questions carry equal marks.

1. Explain any *seven* of the following : 7×2=14

- (a) Exception
- (b) Relationships in UML
- (c) Forward Engineering
- (d) Class and Object
- (e) JRE
- (f) Activity Diagram
- (g) Classifier
- (h) Inheritance

2. (a) What is Multiplicity ? Explain its importance. 7
(b) Draw and explain a state diagram for a login screen. 7
3. (a) What is Attribute and how do you implement it in a class and object diagram ? 7
(b) Explain the building blocks of UML briefly. 7
4. (a) Explain the concept of Java Virtual Machine and the program structure of Java. 7
(b) Explain the concept of Inheritance and Polymorphism in Java with examples. 7
5. (a) Explain structural diagrams briefly. 7
(b) Explain behavioural diagrams briefly. 7
6. (a) What is Constructor in Java ? Explain the concept of overloading a constructor in Java with suitable example. 7
(b) Write a program in Java to display the sum of numbers from 1 to 10. 7
7. (a) Discuss Generalization with the help of a diagram. 7
(b) With the help of an example, explain activity diagram. 7

8. Write short notes on any *four* of the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Package
 - (b) Functional Modeling
 - (c) Use Case
 - (d) Instantiate an Object in Java
 - (e) Association
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