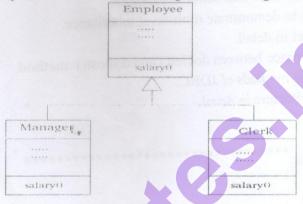
- N.B. 1) All questions are compulsory.
  - 2) Figures to the right indicate marks.
  - 3) Illustrations, in-depth answers and diagrams will be appreciated.
  - 4) Mixing of sub-questions is not allowed.

## Q.I Answer the following (Any four)

20 Marks

- a. Explain features of Java.
- b. Explain encapsulation with proper example.
- c. Explain Thread lifecycle.
- d. Write a program to perform method overriding for below figure

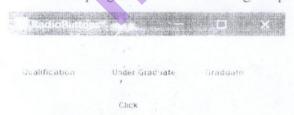


- e. Explain the concept of try and catch with proper example.
- f. Write a short note on the access specifier.

### Q.II Answer the following .(Any four)

20 Marks

- a. Write a program to demonstrate Map interface methods.
- b. Write a short note on the 3-tier architecture of JDBC.
- c. Explain JTextArea with a proper example.
- d. Write a Java program for the following Output.



- e. Explain 7 Steps of DBC Connectivity Model.
- f. Explain Event listener interfaces.

# VCD/ SYCS SEMIII JAVA BASED APPLICATION DEVELOPMENT 21/2 HRS 75 Marks

### Answer the following.(Any four) O.III

Write a short note on Servlet life cycle. a.

20 Marks

- Write a JSP program that prints the reverse of the given number and takes user b. input through HTML.
- Write a short note on the Scripting element. C.
- Explain in detail the JSP Life Cycle. d.
- Explain JSON Data type. e.
- Differentiate JSON and XML. f.

### Answer the following.(Any five) O.IV

Explain the Constructor with suitable example. a.

15 Marks

- Write a program to demonstrate multilevel inheritance. b.
- Explain ResultSet in detail. C.
- Explain the difference between doGet() and doPost() method. d.
- Explain executing methods of JDBC. e.
- Explain JSP architecture in detail. f.