MCA 4th Semester Examination, 2016

JAVA PROGRAMMING LAB

(Practical)

PAPER – MCA-407

Full Marks : 100

Time : 3 hours

The questions are of equal value

Answer any **two** questions selecting it by a **Lucky** draw

1. A cloth showroom has announced the following seasonal discounts on purchase of items :

Purchase amount	Discount (%)	
	Mill cloth	Handloom items
0-100	—	5·0
101-200	5·0	7·5
201-300	7·5	10·0
Above 300	10·0	15·0

Write a JAVA program using switch and if statement to compute the net amount to be paid by a customer.

2. Create a class of object interest with a constructor. Write a Java Program to find the simple interests using the formula

   Simple Interest = PNR/100

   P-principal, N-number of year, R-rate of interest

3. Draw the following figure, where N is no. of rows and its value is to be given by input :

```
            *
        *   *   *
      *   *   *   *   *
    *   *   *   *   *   *   *
  *   *   *   *   *   *   *   *   *
```

   Where, $N = 5$

4. Design a class to represent a bank account. Include the following members :

   Data members :
   - ◊ Name of the depositor
   - ◊ Account number
   - ◊ Type of account
   - ◊ Balance amount

   Methods :
   - ◊ To assign initial values
   - ◊ To deposit an amount
   - ◊ To withdraw an amount after checking balance

   To display the name and balance.

5. Write a JAVA program to find the frequency of different vowels and special characters such as \n, \t and white spaces in a paragraph using switch case.

6. Create a base class called Shape. It contains two methods **getxyvalue( )** and **showxyvalue( )** for accepting co-ordinates and to display the same. Create a subclass called Rectangle.It also contains a method to display the length and breadth of the rectangle called **showxyvalue( )** using overriding concept.

7. Write a JAVA program to find a number out of 10 numbers using binary search technique.

8. Write a JAVA program to implement complex number addition and multiplication using constructor and member functions.

9. Write a Java program that will take 4 cities name and temperature. Then.print the name of cities according to descending values of temperature.

(5)

10. Define an exception called "NotEqualException" that is thrown when a float value is not equal to 3.14. Write a Java program that uses the above user defined exception.

11. Write a JAVA program to check whether given string is palindrome or not.

12. Write a Java program that takes three names as input and print them in their alphabetical order.

Viva   — 20

P.N.B. — 10