**L.D. College of Engineering**

**Information Technology Department**

**Semester V**

**2150704 OBJECT ORIENTED PROGRAMMING USING JAVA**

**List of Practical**

1. Write a program to convert rupees to dollar. 60 rupees=1 dollar.

2. Write a program that calculate percentage marks of the student if marks of 6 subjects are given.

3. Write a program to enter two numbers and perform mathematical operations on them.

4. Write a program to find length of string and print second half of the string.

5. Write a program to accept a line and check how many consonants and vowels are there in line.

6. Write a program to count the number of words that start with capital letters.

7. Write a program to find that given number or string is palindrome or not.

8. Create a class which ask the user to enter a sentence, and it should display count of each vowel type in the sentence. The program should continue till user enters a word “quit”. Display the total count of each vowel for all sentences.

9. Write an interactive program to print a string entered in a pyramid form. For instance, the string “stream” has to be displayed as follows:

S

S t

S t r

S t r e

S t r e a

S t r e a m

10. Write an interactive program to print a diamond shape. For example, if user enters the number 3, the diamond will be as follows:

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\* \*

\* \* \*

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11. Create a class called Student. Write a student manager program to manipulate the student information from files by using FileInputStream and FileOutputStream

12. Refine the student manager program to manipulate the student information from files by using the BufferedReader and BufferedWriter

13. Refine the student manager program to manipulate the student information from files by using the DataInputStream and DataOutputStream. Assume suitable data

14. Prepare a class diagram for given group of classes using multiplicity, generalization, association concepts. And add at least 5-7 attributes and 3-5 operations for particular class Page, Shape, Point, Line, Arc, Ellipse, Rectangle, Circle

15. Prepare a class diagram for given group of classes using multiplicity, generalization, association concepts. And add at least 5-7 attributes and 3-5 operations for particular class. City, Airport, Airline, Pilot, Flight, Plane, Seat, Passenger

16. Categorize the following relationships into generalization, aggregation or association.

[A] A country has a capital city

[B] A dining philosopher uses a fork

[C] A file is an ordinary file or a directory file

[D] Files contains records

[E] A polygon is composed of an ordered set of points

[F] A drawing object is text, a geometrical object, or a group

[G] A person uses a computer language on a object

[H] Modems and keyboards are input/output devices

[I] Classes may have several attributes

[J] A person plays for a team in a certain year

[K] A route connects two cities

[L] A student takes a course from a professor

17. Prepare a state diagram for an interactive diagram editor for selecting and dragging objects

18. Prepare a use case diagram and sequence diagram for a computer email system

19. Prepare an activity diagram for computing a restaurant bill, there should be charge for each delivered item. The total amount should be subject to tax and service charge of 18% for group of six and more. For smaller groups there should be a blank entry. Any coupons or gift certificates submitted by the customer should be subtracted

20. Prepare a sequence diagram for issuing a book in the library management system