JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATIONS-2022

B.Tech-VI Semester (ECE)

COURSE CODE (CREDITS): 19B1WCI734 (2)   MAX. MARKS: 35

COURSE NAME: Object Oriented Technologies using Java

COURSE INSTRUCTORS: Emjee Puthooran   MAX. TIME: 2 Hours

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. (a) What are the difference between Java applets and Java application? Give situations where they are used. [2]

(b) Explain the concept of Data Abstraction, Inheritance and Polymorphism in Object Oriented Programming, with examples from Java. [3]
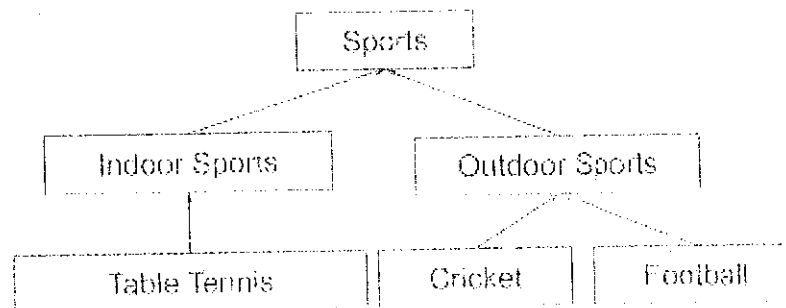
Q2. (a) What is the significance of 'main' method in Java? Why public and static keywords are used with the 'main' method in java? [2]

(b) Differentiate between multiple inheritance and multilevel inheritance giving suitable examples. Is multiple inheritance possible in Java? Why or why not ? [3]

Q3. What are Exceptions in Java? How does Java handle Exceptions? Explain the purpose of finally block in Exception handling. [5]

Q4. Explain the significance of packages in Java. What are the different steps in creating packages in Java. Give at least two pre-defined packages in Java. [5]

Q5. Design and implement the following class hierarchy using Java. Assume suitable data members and member functions for each class. Test your classes using main method. [5]

[P. T. O.]

Q6. Write a Java application that prints from 1 to 100 continuously with a 1 second delay. While the application is printing from 1 to 100, it should take a number from the user, multiply by 2 and print the result. Use multithreading to accomplish this task.   [5]

Q7. Define an Interface ElectricMotor in Java with methods, displayRatings(), displayModel(). Define two classes ACMotor and DCMotor which implement the interface ElectricMotor. ACMotor should have attributes model no., rated voltage, rated current and rated frequency. DC motor should have attributes model no., rated voltage and rated current. Test your classes using main method.