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PRN No.		PAPER CODE	U124-394

May 2024 (ENDSEM) EXAM

F.Y.B. TECH. (SEMESTER - II)

COURSE NAME:	**Branch:**	**COURSE CODE:**
Object Oriented Programming	**Electronics and Telecommunication**	ET12234

(PATTERN 2023)

Time: [1Hr. 30 Min] **[Max. Marks: 40]**

(*) Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data wherever required**
4) **All questions are compulsory. Solve any one sub question from each Question 1 and 2 and any three sub questions each from Questions 3 and 4.**

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Compare "for loop", "while loop" and "do while" loops in java programming.	[5]	1	Understanding
	b) Explain the process by which a Java program determines if a given number is even or odd with suitable code.	[5]	1	Understanding
Q2	a) List types of polymorphism in Java. Explain any one type with a suitable example.	[5]	2	Understanding
	b)Compare Java constructor with Java method	[5]	2	Understanding
Q.3	a) Show the use of packages in Java to create a Student Information System. Demonstrate the allocation of functionalities into distinct packages: one for managing student information and another for course details. Employ these packages effectively within a Main Application to handle student-course interactions.	[5]	3	Apply
	b) Implement the impact of using private access within a package and demonstrate how it enhances encapsulation. Illustrate the significance of this modifier in upholding data integrity and security within a package.	[5]	3	Apply
	c) Illustrate the advantages of using interfaces for multiple inheritance and explain how they foster code reusability and flexibility.	[5]	3	Apply

	d) Construct a Java program using interfaces based on the following requirements: Define a Car interface with the methods: displaySpeed: Takes no parameters and has a void return type. increaseSpeed: Takes an integer parameter speed and has a void return type. Create a Tata_motors class with the following features: Implements the Car interface. Includes a member variable currentSpeed of type integer. Initializes currentSpeed using a parameterized constructor. Implements the increaseSpeed method to add the speed parameter to currentSpeed. Implements the displaySpeed method to print the current speed of the car.	[5]	3	Apply
Q.4	a) Apply your understanding of Java exceptions to compare checked and unchecked exceptions.	[5]	4	Apply
	b) Demonstrate the use of try and catch blocks to handle exceptions in Java. Show how these blocks identify and manage runtime errors within a program.	[5]	4	Apply
	c) Factor in the advantages and limitations of throws and throw, and explain their use in building resilient and maintainable code.	[5]	4	Apply
	d) Show an example where you use multiple catch blocks to handle different types of exceptions	[5]	4	Apply