



P.E.S. College of Engineering, Mandya - 571 401
 (An Autonomous Institution affiliated to VTU, Belagavi)
Fifth Semester, B.E. - Electronics and Communication Engineering
Semester End Examination; February / March - 2022
Fundamentals of Object Oriented Language and Database Concepts

Time: 3 hrs

Max. Marks: 100

Course Outcomes

The Students will be able to:

CO1: Apply basic knowledge of programming in understanding concepts and syntax of Java Programming Language.

CO2: Analyze concepts and syntax of Java programming in developing Java program solutions to problems.

CO3: Implement the various concepts of Java features in the development of Java Program.

CO4: Identify the basic concepts and various data model used in database design ER modeling concepts and architecture use.

CO5: Apply relational database theory to Design queries using SQL.

Note: I) PART - A is compulsory. Two marks for each question.**II) PART - B: Answer any Two sub questions (from a, b, c) for Maximum of 18 marks from each unit.**

Q. No.	Questions	Marks	BLs	COs	POs
I : PART - A		10			
I a.	How Java is different from C and C++?	2	L1	CO1	PO1
b.	What do you mean by method overloading? Write syntax of method overloading.	2	L3	CO2	PO3
c.	Write basic program to show single inheritance.	2	L2	CO2	PO1
d.	List the characteristics of the database approach.	2	L1	CO4	PO1
e.	Describe the concept of a view in SQL.	2	L1	CO5	PO1
II : PART - B		90			
UNIT - I		18			
1 a.	Discuss all features of Java and Object Oriented Paradigm.	9	L2	CO2	PO1
b.	List all the benefits and application of Object Oriented Paradigm.	9	L2	CO1	PO2
c.	Write a Java program to derive the month name by given month number using switch statement.	9	L3	CO2	PO5
UNIT - II		18			
2 a.	Explain overriding of methods. Write a Java program to demonstrate the operation of method overriding.	9	L4	CO3	PO5
b.	Develop a Java program to demonstrate the application of classes and objects.	9	L4	CO3	PO5
c.	i) What is an array in Java programming? How it is created?				
	ii) Write a simple Java program using the concepts of array to sort the given set of number in decreasing order {55, 35, 91, 65, 41}.	9	L4	CO1,3	PO1,5

UNIT - III**18**

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|------|--|---|----|-------|-------|
| 3 a. | Define string buffer class. Create StringOrdering class and write a Java code to demonstrate the use of string manipulation methods. | 9 | L4 | CO3 | PO5 |
| b. | Explain different forms of interface implementation. Write a Java program to compute area of circle and rectangle using interface. | 9 | L3 | CO1,3 | PO1,3 |
| c. | Define package. Write a Java program to illustrate the use of package. | 9 | L3 | CO1,3 | PO1,3 |

UNIT - IV**18**

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|------|--|---|----|-----|-----|
| 4 a. | Define Database. Explain the roles of a database administrator, database designers, end users, system analysts, and application programmers. | 9 | L2 | CO4 | PO1 |
| b. | List and explain the different DBMS interfaces. | 9 | L2 | CO4 | PO1 |
| c. | Explain entities and attributes along with their types in detail. | 9 | L2 | CO4 | PO1 |

UNIT - V**18**

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|------|--|---|----|-----|-----|
| 5 a. | Explain the basic data types available in SQL. | 9 | L2 | CO5 | PO1 |
| b. | Explain INSERT, DELETE and UPDATE statement in SQL with suitable examples. | 9 | L3 | CO5 | PO3 |
| c. | Explain the characteristics of the relations in detail. | 9 | L2 | CO5 | PO1 |

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