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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; Feb. - 2021

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 a subclass constructor? Write the syntax to define subclass constructor in a java program.	2	L3	CO2	PO3
	c.	Write basic program to show, accessing of interface variables.	2	L2	CO2	PO1
	d.	List the advantages of using DBMS 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.	List all the benefits and applications of object oriented paradigm.	9	L2	CO1	PO1
	b.	Discuss all features of java and object oriented paradigm.	9	L2	CO2,1	PO2,1
	c.	i) Describe the functionality of conditional operators and special operators in java.				
		ii) The following java program is written to check whether a number is even or odd. There are some errors in the program, debug them and correct the program				
		class CheckNumber( )	9	L3	CO2	PO5
		{				
		Public static void main (Strings args[ ]) {				
		int *x* = 77;				
		if (*x*/2 ==1) {				
		System.out.println("The Given Number"+*x* "is ODD"); }				
		else{				
		System.out.print("The Given Number :"+*x*);				
		System.out.println("is ODD"); }				
		}				
		}				

Contd… 2

	UNIT - II	**18**			
2 a.	Write a java program to find the area of a room using the concepts of constructors and method overloading. (Note: use two different constructors to measure the area of a rectangular and square room).	9	L4	CO3	PO5
b.	Define inheritance and explain all the four types of inheritance. Write a java program to demonstrate the operation of inheritance.	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 a numbers in ascending order {35, 26, 72, 10, 20, 5}.	9	L3	CO1	PO1
	UNIT - III	**18**			
3 a.	Define string buffer class. Create a class called StringManipulation and write a java code to demonstrate use of string buffer methods.	9	L4	CO3	PO5
b.	Explain various forms of interface implementation. Write a java program to find the area of a rectangle and circle demonstrating interface implementation.	9	L3	CO1	PO3
c.	Illustrate the process of creating, accessing and using a package in a java program.	9	L4	CO3	PO3
	UNIT - IV	**18**			
4 a.	Define Database. Explain activities of the people whose jobs involve the day-to-day use of a large database (Actors on the scene).	9	L2	CO4	PO1
b.	With the help of a neat diagram, describe Three schema architecture.	9	L2	CO4	PO1
c.	Illustrate the main phases of database design with the help of a simplified diagram.	9	L4	CO4	PO1
	UNIT - V	**18**			
5 a.	Explain all the three database modification operations such as insert, delete and update with suitable example.	9	L2	CO4	PO1
b.	Explain the SELECT-FROM-WHERE structure of basic SQL queries, with a simple example.	9	L4	CO5	PO3
c.	Write a note on comparisons involving NULL and Three-valued logic, under complex SQL retrieval queries in a database.	9	L2	CO5	PO3

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