2021 Scheme

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NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY

NITTE EDUCATION TRUST

An Autonomous Institution Approved by UGC/AICTE/Govt. of Karnataka
Accredited by NBA (Tier – I) and NAAC 'A+' Grade
Affiliated to Visveswaraya Technological University, Belagavi
Post Box No. 6429, Yelahanka, Bengaluru – 560 064, Karnataka, India

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MID SEMESTER EXAMINATION-I

Course Title with code	OOP with JAVA(21CS35)	**Maximum Marks**	**30 Marks**
Date and Time	17/12/2022, 9.15-10.15am	**No. of Hours**	1.0
Course Instructor(s)	Dr. Vijaya Shetty S/Ms. Shruthi Shetty/Sowmya P		

1. Answer any **two full questions.**
2. Any missing data may assume suitably.

Q. No	Question	MAX MARKS	CO	BL	PO/PSO

1. a	Complete the code for **compare** method to compare 2 objects of Employee class and return the Employee object with greater age.
	Class Employee{
	String name;
	int age;
	Employee (String n, int a)
	{ name=n;
	age=a;
	}
	Employee **compare**(Employee E)
	{
	
	}
	void display() {
	System.***out***.println("Name:"+ name);
	System.***out***.println("Age:"+ age);
	}
	}
		2	1	2	1,3/ 1,2

1. b	Java is designed to enable the development of portable, high-performance applications for the widest range of computing platforms possible. Discuss the major underlying OOP principles of Java.	6	1	2	1,3/ 1,2
1. c	Develop a Java program to define a Student class including private fields such as name, USN, age, Branch and CGPA. Include a parameterized constructor to initialize the Student object and a display method to print the Student details. In the main method create an array of size N of Student class and print details of students of CSE Branch with CGPA greater than or equal to 9. Setter and getter methods may be used if required.	7	1	3	1,3/ 1,2
2. a	Illustrate through suitable examples the usage of final keyword in Java.	5	2	2	1,3/ 1,2

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2. b	Devise an abstract class F1 with two data members X and Y and member function compute(). Devise a class R1 that extends F1 and overrides the compute() function to return X+Y. Devise another class T1 that extends F1 and override the compute() function to return (X*Y)/2. Write a main method that uses run time polymorphism to call the overridden methods.	5	2	3	1,3/ 1,2
2. c	Demonstrate multilevel inheritance of Animal->Dog->BabyDog. Each class should have a method displaying a message specific to the animal. Create an object of each class and invoke all the relevant methods.	5	2	3	1,3/ 1,2
3. a	Describe garbage collection and finalize() method in Java.	3	1	2	1,3/ 1,2
3. b	Write a Java program by using class with the following specifications: Class name- Book Instance variables- String: title, author, Publisher Double: Cost. Member methods: i. void input ()- Accepts the title, author name, Publisher name and Cost of the book from the console. ii. void display ()- display the title, author name, Publisher name and Cost of the book.	6	1	3	1,3/ 1,2
3. c	Devise an Interface namely Bank with a method float rateOfInterest(). Implement Bank in 2 classes namely SBI and PNB. Rate of interest in SBI is 8.7 and 6.8 in PNB. Devise a tester class with main method to create a reference of Bank and invoke rateOfInterest() methods of SBI and PNB through dynamic method dispatch concept.	6	2	3	1,3/ 1,2

Faculty Signature	Course Co-Ordinator/Mentor Signature	HoD Signature