MID-TERM EXAMINATION
(Course Name : MCA) (Semester : 2nd sem)
(March, 2024) OFFLINE mode

Subject Code: MCA-102	Subject: Object Oriented Programming Using Java
Time : 1 ½ Hours	Maximum Marks : 30
Note: Q. 1 is compulsory.	

Q1		(5,5)
	a)Using with explain i) Multiple inheritance ii) abstract and non abstract class	
	b)Explain (using program example) i) Dynamic method dispatch ii)Array of Objects	

Q2	(Attempt any Two Parts)	(,5,5)
	a)Create a class in java called BookAuthor which describes its author_id(type int),book_name(type String),Author_no_books(type int) and book_cost(type float) (member variables).Use constructor, specific methods to get and set the details.WAP in java to create an array of 3 objects of class Author and show the details of the authors.	
	b)Create a Class Employee with name,age, salary, department and required methods to set/get the Employee information. Create an array of objects of Employee class and initialize and display information of an employee.	
	c)Explain i) JVM architecture ii) memory allocation and deallocation in java	

Q3	(Attempt any Two Parts)	(5,5)
	a) Describe packages? Using programs explain the visibility of members of class in subclass and non-sub-class in different packages.	
	b) Create an abstract class MetroTrain to represent DMRC. Provide an abstract function notice in this class. Derive LadiesCoach and GeneralCoach class from the MetroTrain class. Create a class MainMetroTrain and create an array of objects using super class reference and then print notices for Ladies and General class.	
	c)Create a package called "Math", and create methods to perform different functions like Addition ,Subtraction ,Multiplication and Division on two numbers. Use the Package in your program. Also explain how we can compile and run a program in a package.	

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