K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

	SUMMER-2023		
	Exam Seat No.:		
	Academic Year:2022-2023	Semester:II	
	Name of Programme:MCA	Pattern:2022	
	Name of Course:Object Oriented Programming	Course Code:MCA222001	
	Max. Marks:60	Duration:2.50	

	Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use. 1. This question paper contains 02 page(s). 2. Answer to each new question is to be started on a new page. 3. Assume suitable data wherever required, but justify it. 4. Draw the neat labelled diagrams, wherever necessary. 5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question	

Question No. 1 Attempt following Question

1a)	Describe how to define classes in C++.	(3)	CO1
1b)	What are the various constructors in C++? Provide an explanation and the corresponding syntax for each of them.	(3)	CO1

Question No. 2 Attempt following Question

2a)	Illustrate the concept of overloading in C++.	(3)	CO3
2b)	How would you modify a class in C++ to ensure that its member variables can only be accessed and modified within the class itself?	(3)	CO3

Question No. 3 Attempt following Question

3a)	a) Sketch in detail fundamental java programming structure.	(8)	CO5
	OR		
3b)	Write a Java program to demonstrate static nested class and elaborate non static inner class in details	(8)	CO5
3c)	Discuss about problem with multiple Inheritances and write a program to implement interface concept to solve any real life problem.	(8)	CO5

OR

3d)	Describe static data member and static method and write program to implement the static data member and static method concept in Java.	(8)	CO5

Question No. 4 Attempt following Question

4a)	Discuss abstract class and final class with suitable example	(8)	CO2

OR

4b)	Explain life cycle of thread and thread priorities in detail	(8)	CO2
4c)	Describe how to implement multi threading concept in java with suitable example	(8)	CO2

OR

4d)	Define Exception. Illustrate the exception handling concept in detail.	(8)	CO2

Question No. 5 Attempt following Question

5a)	Illustrate applet life cycle in detail.	(8)	CO4

OR

5b)	a) Write a Java program to demonstrate the use of Swing component like JButton, JTextfield, JLabel, JTextArea.	(8)	CO4
5c)	Write a Java program to demonstrate the use of border layout in AWT.	(8)	CO4

OR

5d)	Illustrate AWT and Swing in detail and Implement program which makes use of Japplet and icon.	(8)	CO4

***ALL THE BEST ***