



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

	InSem Examination-IWinter 2023		
	Exam Seat No.:		
	Academic Year:2023-2024	Semester:III	
	Name of Programme:MCA	Pattern:2022	
	Name of Course:Machine Learning	Course Code:MCA223002	
	Max. Marks:30	Duration:1	

**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 \_\_2\_\_ 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**

- a) Explain Leave One Out Cross Validation and k-fold cross validation technique with example (8) CO1

**OR**

- b) Explain types of learning with suitable example (8) CO1
- c) What is Machine learning? Explain any two types of Machine learning models (7) CO1

**OR**

- d) Describe Positive and Negative class. Explain confusion matrix with suitable example (7) CO1

**Question No. 2 Attempt following Question**

- a) Illustrate min max and Z score normalization with suitable example (8) CO2

**OR**

- |    |  |     |     |
|----|--|-----|-----|
| b) | Illustrate feature engineering processes                                     | (8) | CO2 |
| c) | Demonstrate methods to handle missing values available in attributes of data | (7) | CO2 |

**OR**

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|----|--|-----|-----|
| d) | What is dimensionality reduction? Illustrate steps of Principle Component Analysis | (7) | CO2 |
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