QP CODE: D3BCS2404	**(Pages: 2)**	**Reg. No**	**: ....**
		Name	**: ....**

THIRD SEMESTER FYUGP EXAMINATION, NOVEMBER 2025

Discipline Specific Core (DSC) Course - Minor

CSC3MN202 : Introduction to AI and Machine Learning

(Credits: 4)

Time: 2 Hours **Maximum Marks: 70**

Section A

Answer the following questions. Each carries 3 marks (Ceiling: 24 marks)

1.	Define Artificial Intelligence and mention two of its key objectives.	BL1	CO1
2.	List any two types of Machine Learning approaches.	BL2	CO1, CO2, CO4
3.	Define Artificial Neural Network (ANN).	BL1	CO3
4.	What is an agent in reinforcement learning?	BL1	CO4
5.	Which function is used to split datasets into training and testing sets?	BL3	CO3, CO4
6.	In the context of e-commerce, how does NLP help chatbots interpret and answer customer queries?	BL3	CO1
7.	What is the use of the Pandas library in Python?	BL1	CO3, CO4
8.	Define unsupervised machine learning.	BL1	CO4
9.	How does the threshold function affect the output of a perceptron?	BL2	CO3
10.	State the difference between shallow learning and deep learning.	BL1	CO4

Section B

Answer the following questions. Each carries 6 marks (Ceiling: 36 Marks)

11.	Discuss any two informed search methods with examples.	BL2	CO2
12.	Explain the importance of hidden layers in learning complex patterns.	BL2	CO4
13.	Suppose you are predicting house prices from size. Which supervised learning technique will you use and why?	BL2	CO5

(PTO)

14.	Define Matplotlib and mention its main purpose in Python programming.	BL1	CO3, CO4
15.	Differentiate between clustering and classification with examples.	BL1	CO5
16.	Write a Keras code snippet to create a Sequential model with one input layer, one hidden layer, and one output layer.	BL3	CO3, CO4
17.	Explain the role of neural networks in Deep Learning and how it contrasts with algorithmic approaches in traditional ML	BL2	CO4, CO5
18.	Explain about the various activation functions used in ANN.	BL2	CO3
	Section C		
	Answer any one question. Each carries 10 marks (1 x 10 = 10 Marks)		
19.	Explain about various game playing techniques in AI.	BL2	CO2
20.	Discuss the applications of Machine Learning in healthcare and finance.	BL2	CO4, CO5
	CO : Course Outcome		
	BL : Bloom's Taxonomy Levels (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)		