TED(21) - 5133C **REVISION 2021**

MODEL QUESTION PAPER

Fundamentals of Artificial Intelligence and Machine Learning

Time: 3 Hours **Max Marks:75**

I. Answer all the following questions (9 x 1 = 9 Marks)

1	……. refers to the simulation of human intelligence in machines.	M1.01	U
2	List three fields which AI is being used.	M1.03	U
3	Write syntax of if statement in Python	M2.02	U
4	Identify the data structure used in the following code: data = {"course": "3012", "program": "CT", "scheme": 2021 }	M2.03	U
5	What will be the output of following python code: str='python' print(str[::-1])	M2.03	A
6	List three classification algorithms used in Supervised learning	M3.03	U
7	List two technics used in data preprocessing.	M3.04	U
8	Name two *categories* of Search Algorithms in AI	M4.02	U
9	List two games based on Minimax Algorithm	M4.02	U

II. Answer any Eight questions from the following (8 x 3= 24 Marks)

1	Describe three tools used in AI	M1.03	U
2	Write three types of learning in AI	M1.02	R
3	Explain **for** loop in Python with suitable example	M2.02	U
4	Write python code to count even numbers in a list	M2.03	A
5	Write python code to define a Dictionary with country name and currency. Dictionary should contain atleast 3 countries.	M2.03	A
6	Write short note on preprocessing	M3.04	R
7	List the Steps for Building a Classifier in Python	M3.05	U
8	Differentiate Supervised and Unsupervised learning	M3.02	U
9	List search algorithms used in AI	M4.01	U

10	List steps to build a Tic Tac Toe game	M4.05	U

III. Answer all questions from the following (6x 7 = 42 Marks)

1	Describe different fields of AI	M1.03	R
	OR		
2	List Applications of AI	M1.04	R
	OR		
3	Explain Features of Python programming language	M2.02	U
	OR		
4	Write a python program to input Reg No., Name and Marks for a subject. Calculate the grade of student as follows: 90 and above – S 80-90 - A 70-80 - B 60-70 - C 50-60 - D 40-50 - E Below 40 - F	M2.03	A
	OR		
5	Explain List and Dictionary data types in python	M2.03	U
	OR		
6	Implement programs using String 1.convert a string to uppercase 2.count the occurrence of a character in a string 3. split a string into a list of words	M2.02	A
	OR		
7	Explain algorithms Linear Regression and name any 5 applications	M3.02	U
	OR		
8	Explain algorithms SVM	M3.03	U
	OR		
9	Explain Preprocessing techniques Binarization, Mean Removal and Scaling	M3.04	U
	OR		
10	Compare Classification and Regression algorithms in ML	M3.02	U

	OR		
11	Explain Minimax Algorithm	M4.02	U
	OR		
12	List the steps to design a Last Coin Standing game using AI	M4.04	U