PRN:		Course Code :	MCA204

Second Year **M.C.A** End Semester Examination Winter 2023

A.I and Applications

Day and Date: Thursday 30/11/2023 Max Marks: **100**

Time : 2.00 pm to 5.00 pm Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt the following**			
	a)	What is AI? Explain its importance.	08	L1	CO1
	b)	Define application area. with example	08	L1	CO1
		OR			
	b)	What is production system? and its types.	08	L2	CO2
Q.2		**Attempt the following**			
	a)	What is artificial intelligence and write advantages and disadvantages?	08	L1	CO1
	b)	Write breadth first search (BFS) algorithm with example.	08	L2	CO2
		OR			
	b)	Write depth first search (DFS) algorithm with example.	08	L1	CO2
Q.3		**Attempt any two from the following**			
	a)	Differentiate between supervised learning and unsupervised learning	08	L4	CO4
	b)	Describe dynamic time warping.	08	L1	CO2
	c)	Describe with example constraint satisfaction problem.	08	L1	CO3
Q.4		**Attempt any two from the following**			
	a)	Explain reinforcement learning technique.	08	L2	CO2

b) Solve by using k-means clustering algorithm 08 L1 CO1

X	Y
2	3
5	6
8	7
1	4
2	2
6	7
3	9
8	6

c) Illustrate different steps of machine learning techniques to choose appropriate one. 08 L3 CO2

Q.5 **Attempt any Two of the following**

a) Explain with example LSTM algorithm. 09 L1 CO1
b) Explain the work of back propagation algorithm in neural network. 09 L1 CO1
c) Illustrate with example recurrent neural network. 09 L4 CO4

Q.6 **Attempt any Two of the following**

a) What is neural network? Explain back-propagation neural network. 09 L2 CO4
b) Explain building blocks of expert systems 09 L4 CO4
c) Explain with example LSTM algorithm. 09 L4 CO4

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