SRM Institute of Science and Technology
College of Engineering and Technology
School of Computing

Mode of Exam
OFFLINE

DEPARTMENT OF COMPUTATIONAL INTELLIGENCE

SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamilnadu

Academic Year: 2022-2023(ODD) **Batch 2 (SET A)**

Test: CLAT- 2 **Date: 05.04.2023**

Course Code & Title: 18CSE481T / Applied Machine Learning

Duration: 2 periods

Year & Sem: III & 6th sem **Max. Marks:** 50

Course Articulation Matrix:

S.No.	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14
1	CO1	H	M	H	-	H	-	-	-			H	H	H	H
2	CO2	H	M	H	-	H	-	-	-			H	H	H	H
3	CO3	H	M	H	-	H	-	-	-			H	H	H	H
4	CO4	H	M	H	-	H	-	-	-			H	H	H	H

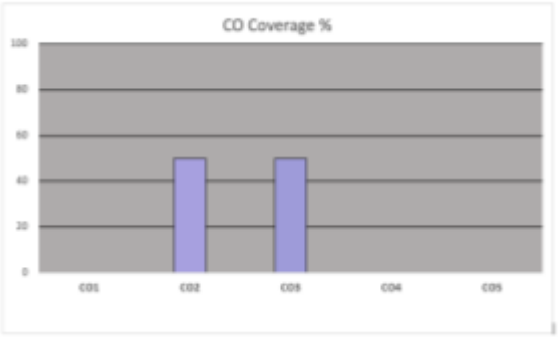
Answer all **Part – A** **(10 x 1 = 10 Marks)**

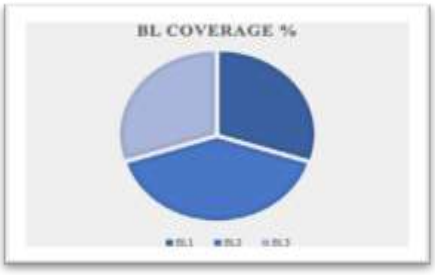
Q. No.	Question	Marks	BL	CO	PO	PI Code
1	_____ kind of signal is used in speech recognition. a) Electromagnetic signal b) Electric signal c) Acoustic signal d) Radar	1	1	2	2	2.2.1
2	_____ is called as the properties of the signal that extend over interval a) Hops b) Rate c) Frames d) Bytes	1	1	2	2	2.2.1
3	_____ of the following are advantages of Automatic Speech Recognition. a) Increases productivity b) Susceptibility for background noise c) Both a and b d) Reduces execution time	1	1	2	2	2.2.1
4	An effective Automatic Speech Recognition system can replace, or reduce the reliability on _____ a) voice input b) hand gestures c) standard audio input d) standard keyboard and mouse input	1	2	2	2	2.2.1
5	_____ are periodic changes in pressure that propagates through the air. a) Air waves b) Sound waves c) Rate d) moisture	1	2	2	2	2.2.1
6	_____ model does the additional variables are added in HMM a) Temporal b) Reality c) Probability d) Uncertain	1	1	3	3	3.2.1
7	The state of the process is described in Hidden Markov Model as ___ a) Literal b) Single random variable c) Single discrete random variable d) Discrete variable	1	1	3	3	3.2.1
8	Increase in the number of patients in the hospital due to heat stroke is a) secular trend b) irregular variation c) seasonal variation d) cyclical variation	1	2	3	3	3.2.1
9	A time series consists of _____ a) Arithmetic series b) Long-term variations c) Irregular variations d) All of the above	1	1	3	3	3.2.1
10	_____ of the following is true for the coefficient of correlation. a) The coefficient of correlation is not dependent on the change of scale b) The coefficient of correlation is not dependent on the change of origin c) The coefficient of correlation is not dependent on both the change of scale and change of origin d) The coefficient of correlation is dependent on both the change of scale and change of origin	1	1	3	3	3.2.1

18CSE481T / Applied Machine Learning Batch 2 (SET A)						
Answer all	**Part – B**					**(4 x 5 = 20 Marks)**
Q. No.	**Question**	**Marks**	**BL**	**CO**	**PO**	**PI Code**
11	Write a short note on Synthesizing music with python code.	5	2	2	2	2.2.3
12	Explain Hidden Markov model with an example.	5	3	2	2	2.2.3
13	(i) Compare Time series and Sequential data. Give examples. (ii) Brief about Time-series data types.	5	3	3	3	3.2.2
14	Brief about the components affecting Time-series data with example for each.	5	2	3	3	3.2.2
Answer all	**Part – C**					**(2 x 10 = 20 Marks)**
Q. No.	**Question**	**Marks**	**BL**	**CO**	**PO**	**PI Code**
15 (a)	Identify the method used to convert analog signals to digital signals. Explain the processing steps in detail. **(OR)**	10	3	2	2	2.2.4
15 (b)	Illustrate the need of Mel Frequency Cepstral Coefficients in speech recognition system with python code.	5+5	3			
16 (a)	Explain transforming text data into time-series data and slicing time-series data with python code. **(OR)**	5+5	3	3	3	3.2.3
16 (b)	Explain operating on time-series data and extracting statistics from time-series data with python code.	5+5	3			

***Performance Indicators are available separately for Computer Science and Engineering in AICTE examination reforms policy.**

Course Outcome (CO) and Bloom's level (BL) Coverage in Questions





Approved by the Audit Professor/Course Coordinator