

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2021

Course: Application of Machine Learning in Industries

Semester: 6th

Program: B.Tech CSE(AI-ML)

Time 03 hrs.

Course Code: CSAI3006

Max. Marks: 100

SECTION A

1. Each Question will carry 5 Marks

2. Instruction: Complete the statement / Select the correct answer(s)

S. No.		CO
Q 1	(i)Which of the following system/model can be indicated by directed acyclic graph (it is also referred as a belief network)? a) Deep neural network b) Bayesian classifier c) Support Vector Machine d) Decision tree (ii)Write any four supervised learning algorithm used in banking sector for various classification applications _____ , _____ , _____ , _____ .	CO2
Q 2	Following are the five features of rule based expert system. _____ , _____ , _____ , _____ , _____ .	CO1
Q 3	Following are the five reasons we can use deep learning for medical image analysis _____ , _____ , _____ , _____ , _____ .	CO3
Q 4	Following three are the advantages of random forest _____ , _____ , _____ . In addition, random forest is an _____ of _____ trees.	CO1
Q 5	_____ is the collective name for a set of language modelling and feature learning techniques, language processing where words or phrases from the vocabulary are mapped to vectors of real numbers.	CO2
Q 6	The recommender system technology recommend users and help setting up in the environment for following four things like: _____ , _____ , _____ , _____ . And in association rule mining(market basket model) we compute support and _____ .	CO3

SECTION B

1. Each question will carry 10 marks

2. Instruction: Write short / brief notes

Q 1	Discuss in detail the different ML techniques that are used in legend based automatic drug discovery process.	CO3
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Q 2	Discuss in detail how lexicon based and Machine Learning based approaches are useful in students' feedback system in any academic institution.	CO3
Q 3	Machine Learning based techniques can be used to analyze and evaluate the credit risk data sets. Justify with suitable example.	CO2
Q 4	Compare rule based and machine learning based techniques used in fraud detection in banking sector with its advantages and disadvantages.	CO1
Q 5	<p>Technological progress, rate of innovation are some of the factors behind paradigm shift from traditional AI to modern AI. Systematically analyze how this shift has taken place, taking into consideration suitable parameters/attributes based on which one can differentiate between traditional AI and modern AI with suitable real life application.</p> <p style="text-align: center;">OR</p> <p>How machine-learning models can be helpful in transportation sector. Discuss in brief with suitable example.</p>	CO4

SECTION-C

1.Each question carries 20 marks

2.Instruction : Write long answer.

Q 1	<p>The filtering technique is based on the resemblances of the users and it is built on collecting and analyzing information of user's activities such as their behavior and choices. Justify your answer with types of collaborative filtering.</p> <p style="text-align: center;">OR</p> <p>Design a neural based machine translation system and explain its process of working in detail. Also discuss how MT evaluation can be done with BLEU score taking suitable machine generated output and reference translations.</p>	CO4
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