


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, December 2022			
Course: Application of Machine Learning in Industries Semester: VII Program: B.Tech.(CSE + BAO) (Hons.) Time : 03 hrs. Course Code: CSBA4016P Max. Marks: 100			
Instructions:			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q1	Recommendation systems are very popular now-a-days, how would you understand by them? Discuss in briefly three different approaches to build recommendation engines.	4	CO1
Q2	In the age of almost everything in retail industry going online, what would be your take on the use of intelligent technologies in this area?	4	CO4
Q3	The penetration of digitization in education has been enormous in last one decade and use of machine learning therein. Give your understanding of paradigm shift, during pandemic hit, of use of intelligent techniques in education industry.	4	CO2
Q4	Fraud detection has become one of the heavy money-saving area in banking sector. Compare the rule-based and machine-learning based approaches in fraud detection in banking industry by taking at least 4 parameters	4	CO1
Q5	What are the various parameters to be considered during Insurance underwriting process? How machine-learning algorithms can be helpful in Insurance underwriting process? Discuss.	2+2	CO3
SECTION B (4Qx10M= 40 Marks)			
Q6	Discuss various steps involved in drug discovery process. Suffice with the applications of Machine Learning approaches at each of these steps distinctively.	10	CO4
Q7	Off late, the government administration has become smart with the advent and use of automation. Write 3 use cases where do you think ML algorithms are playing/can play vital role in this domain.	10	CO3
Q8	Write the process of algorithmic trading and the use of machine learning in it.	10	CO1

Q9	<p>Petroleum Industry also relies heavily on data analysis. Discuss the applications of machine-learning techniques in the area of energy generation.</p> <p style="text-align: center;">OR</p> <p>Discuss the applications of machine-learning techniques in the area of Supply Chain</p>	10	CO4
<p>SECTION-C (2Qx20M=40 Marks)</p>			
Q10	<p>Many applications around sentiment analysis prevail in the area of various businesses, political campaigns even in day to day advertising. Which different steps do you visualize during the entire sentiment analysis process? Discuss the use of various intelligent techniques pertinent to each step at appropriate places.</p> <p>Discuss one of the application area as a case study of this.</p>	15+5	CO2/ CO3/ CO4
Q11	<p>Prediction plays a vital role in giving boost to the advance planning of so many things related to the domain in which the predictive analytics is being done. Discuss various machine-learning techniques useful in predictive analytics. Also mention the domains where the predictive analytics plays important role.</p> <p style="text-align: center;">OR</p> <p>Enlist various deep learning models. Compare the architectures of these models in detail.</p>	15+5 5+15	CO1/ CO2/ CO3 /CO4