Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: Applications of ML in Industry **Semester: VI**
Program: B.Tech-CSE-AIML **Time: 03 hrs.**
Course Code: CSAI 3006 **Max. Marks: 100**

Instructions: Explain in short. (60-70 words)

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Distinguish between supervised learning and reinforcement learning. Illustrate with an example dominant in banking domain.	**4**	**CO1**
Q 2	Explain the procedure for the computation of the principal components in terms of healthcare data.	**4**	**CO2**
Q 3	Briefly discuss Probably Approximately Learning with a suitable example in smart manufacturing industry.	**4**	**CO3**
Q 4	Deliberate potential use cases of automation and customer segmentation of machine learning in insurance sector.	**4**	**CO4**
Q 5	Discuss any two major applications of machine learning in medical imaging.	**4**	**CO2**

SECTION B
(4Qx10M= 40 Marks)

Instruction: Write brief notes. (100-150 words)

Q 6	Explain the working of banks in proactively monitoring customer behavior in terms of spending patterns and preventing fraud detection.	**10**	**CO1**
Q 7	Describe the significance of AI enabled Chatbots in a manufacturing domain especially in sensing data and predicting breakdowns.	**10**	**CO3**
Q 8	Discourse about the applications of machine learning in adaptive and personalized learning in especially in higher education domain. OR Discuss any two major applications of machine learning which are prevailing in the education industry.	**10**	**CO2**
Q 9	Converse the role of e-commerce giants using any machine learning model in managing manufacturing systems and upholding the quality control of the product.	**10**	**CO3**

SECTION-C **(2Qx20M=40 Marks)** **Instruction: Write long answer. (Up to 350 words while explaining)** **Attempt any part of question no. 10 as there is an option "a" OR "b".** **There is no choice for question no.11.**			
Q 10	Discuss the role of pull, push, just in time inventory management strategies in detail with suitable examples. OR Discuss as how machine learning algorithms can be applied in predicting premiums and losses for any insurance policy with an appropriate example.	**20**	**CO4**
Q 11	Deliberate any use case of machine learning in smart grid and energy domain.	**20**	**CO5**