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**MIT WORLD PEACE
UNIVERSITY** | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

PRN: 632210846

Term End Examination

Dec 2023

CET3026B - Artificial Intelligence and Machine Learning Techniques

Question Paper ID: 026366

Faculty/School	Engineering and Technology	Term	Semester V
Program	TY B.Tech CSF	Duration	2 Hours 30 Minutes
Specialization		Max. Marks	70

Section - 1 (7 X 10 Marks)

Answer any 7 questions

✓1	What is the A* algorithm? Explain various stages of A* search with 8 puzzle problem.	10 marks	CO1	Applying
2	Discuss Resolution in predicate logic in brief with an example.	10 marks	CO2	Analysing
3	Explain the concept of Bayes theorem with an example. What are the applications of Bayes' theorem in Artificial intelligence?	10 marks	CO3	Applying
✓4	Compare Supervised and Unsupervised Learning with their characteristics, applications, and challenges. Use real-world examples to showcase their contributions to problem-solving.	10 marks	CO3	Applying
✓5	Describe Linear Regression and discuss the steps involved in training a linear regression model, including the role of the cost function.	10 marks	CO4	Understanding
✓6	Explain how a Support Vector Machine can be used for the classification of linearly separable data. What is the significance of optimal separating hyperplane in SVM?	10 marks	CO4	Applying
7	Explain different methods for measuring classifier performance.	10 marks	CO4	Remembering
✓8	Define Neural Networks and provide their detailed architecture and functioning.	10 marks	CO5	Understanding
9	What are the different types of activation functions used in neural networks? Explain each of them.	10 marks	CO5	Remembering
✓10	What is K means Clustering? Explain different methods of clustering.	10 marks	CO5	Understanding

END OF QUESTION PAPER