

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Course: Artificial Intelligence
Program: B.Tech CSE (OSS)
Course Code: CSEG 3005

Semester: V
Time 03 hrs.
Max. Marks: 100

Instructions: Attempt all Sections

SECTION A

Attempt all questions. Each question carries 4 marks

[20 marks]

S. No.		Marks	CO
Q1	Bring out the importance of AI. Also list the reasons for using AI.	4	CO1
Q2	Differentiate between episodic and sequential agent environment in AI	4	CO1
Q3	"Intelligence is an intangible part of our brain". In order to achieve the same levels of intelligence what factors are required for a machine.	4	CO2
Q4	List the advantages and disadvantages of using AI.	4	CO2
Q5	Draw flowchart showing working of EM Algorithm.	4	CO3

SECTION B

Attempt all questions. Each question carries 10 marks

[40 marks]

Q6	Explain the different types of Intelligent Agents.	10	CO3
Q7	Compare and Contrast between Informed and Uninformed Search Algorithms. Also explain BFS and A* search Algorithms.	10	CO4
Q8	Deliberate on the working of Alpha Beta Pruning Algorithm.	10	CO4
Q9	From a standard deck of playing cards, a single card is drawn. The probability that the card is king is 4/52, then calculate posterior probability P(King Face). OR Using appropriate examples and diagrams explain the working of SVM algorithm	10	CO5

SECTION-C

Attempt all questions. Each question carries 20 marks

[40 marks]

Q10	Using examples discuss the steps involved in building an NLP Pipeline.	20	CO5
Q11	"As per the law, it is a crime for an American to sell weapons to hostile nations. Country A, an enemy of America, has some missiles, and all the missiles were sold to it by Robert, who is an American citizen." Use Forward-Chaining Algorithm to prove that "Robert is Criminal". OR Represent the following statements in FOL : 1. Lucy* is a professor, 2. All professors are people, 3. John is the dean, 4. Deans are professors, 5. All professors consider the dean as friend or don't know him, 6. Everyone is a friend of someone, 7. People only criticize people that are not their friends, 8. Lucy criticized John.	20	CO2