

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

Online End Semester Examination, Dec 2020

Programme Name: B. Tech. CSE All Branches (BAO)

Semester : VII

Course Name : Expert System (Program Elective)

Time : 03 hrs

Course Code : CSBA 4009

Max. Marks : 100

Nos. of page(s) : 2

Instructions:

SECTION A

1. Each Question will carry 5 Marks

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

S. No.		Marks	CO
Q 1	Which of the following is an advantage of using an expert system development tool? 1) Imposed structure. 2) knowledge engineering assistance 3) rapid prototyping 4) all of the mentioned	5	CO2
Q2	Input segments of AI programming contain(s)? 1) sound 2) smell 3) touch 4) none of the mentioned	5	CO3
Q3	Forward chaining systems are _____ where as backward chaining systems are _____ 1) Goal-driven, goal-driven 2) Goal-driven, data-driven 3) Data-driven, goal-driven 4) Data-driven, data-driven	5	CO3
Q4	A knowledge-based agent can combine general knowledge with current percepts to infer hidden aspects of the current state prior to selecting actions. 1) True 2) False	5	CO2
Q5	A) Knowledge base (KB) is consists of set of statements. B) Inference is deriving a new sentence from the KB. Choose the correct option. 1) A is true, B is true 2) A is false, B is false 3) A is true, B is false 4) A is false, B is true	5	CO4
Q6	Like semantic networks, frames can be queried using spreading activation.	5	CO4

	1) True 2) False		
SECTION B			
1. Each Question will carry 10 Marks 2. Instruction: Write short/ brief notes			
Q7	i) Enumerate and explain the five major characteristics of Expert Systems. ii) Explain the role of knowledge in Decision Making?	10	CO1
Q8	i) What is Knowledge Engineering? ii) Discuss the type of knowledge?	10	CO2
Q9	Forward Chaining And Backward Chaining Inference Techniques (Explain with Example) Difference between rule and frame based system Explain Fuzzy Logic and its application.	2.5 + 2.5 + 5	CO3
Q10	Difference between Genetic Algorithms and Genetic Programming.	10	CO4
Q11	Describe briefly the applications of AI. (explain with example)	10	CO1
SECTION-C			
1. Each Question will carry 20 Marks 2. Instruction: Write long answer			
Q12	1) Explain Hopfield Network. 2) Explain the algorithm for Back-propagation in Neural Networks. 3) Describe briefly the applications of Neural Networks.	5+10+ 5	CO5