Program: BE Information Technology Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: BEITC801 **Course Name: Artificial Intelligence**

Time: 2 hour   Max. Marks: 80

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q. I	Solve the following MCQ , 2 marks each.
Q1.	Which instruments are used for perceiving and acting upon the environment?
Option A:	Sensors and Actuators
Option B:	Sensors
Option C:	Perceiver
Option D:	Actuators
Q2.	How many types of agents are there in artificial intelligence?
Option A:	1
Option B:	2
Option C:	3
Option D:	4
Q3.	What is the rule of simple reflex agent?
Option A:	Simple-action rule
Option B:	Condition-action rule
Option C:	Simple & Condition-action rule
Option D:	None of the mentioned
Q4.	Where does the performance measure is included?
Option A:	Rational agent
Option B:	Task environment
Option C:	Actuators
Option D:	Sensor
Q5.	What is the expansion if PEAS in task environment?
Option A:	Peer, Environment, Actuators, Sense
Option B:	Perceiving, Environment, Actuators, Sensors
Option C:	Performance, Environment, Actuators, Sensors
Option D:	Learning, Observing
Q6.	What is state space?
Option A:	The whole problem
Option B:	Your Definition to a problem

Option C:	Problem you design
Option D:	Representing your problem with variable and parameter
Q7.	Heuristic function h(n) is _____
Option A:	Lowest path cost
Option B:	Cheapest path from root to goal node
Option C:	Estimated cost of cheapest path from root to goal node
Option D:	Average path cost
Q8.	Which search is similar to minimax search?
Option A:	Hill-climbing search
Option B:	Depth-first search
Option C:	Breadth-first search
Option D:	Bidirectional search
Q9.	Which closely resembles propositional definite clause?
Option A:	Resolution
Option B:	Inference
Option C:	Conjunction
Option D:	First-order definite clauses
Q10.	What is the main advantage of backward state-space search?
Option A:	Cost
Option B:	Actions
Option C:	Relevant actions
Option D:	practical actions
Q11.	How many terms are required for building a bayes model?
Option A:	1
Option B:	2
Option C:	3
Option D:	4
Q12.	What is Machine Translation?
Option A:	Converts one human language to another
Option B:	Converts human language to machine language
Option C:	Converts any human language to English
Option D:	Converts Machine language to human language
Q13.	Where does the bayes rule can be used?
Option A:	Solving queries
Option B:	Increasing complexity
Option C:	Decreasing complexity
Option D:	Answering probabilistic query
Q14.	Which condition is used to cease the growth of forward chaining?

Option A:	Atomic sentences
Option B:	Complex sentences
Option C:	No further inference
Option D:	Simple sentences
Q15.	Which value is assigned to alpha and beta in the alpha-beta pruning?
Option A:	Alpha = max
Option B:	Beta = min
Option C:	Beta = max
Option D:	Alpha = max & Beta = min
Q16.	Incorrect information results in unsatisfied preconditions for actions and plans _____ detects violations of the preconditions for successful completion of the plan.
Option A:	Conditional Plan
Option B:	Conformant Planning
Option C:	Execution monitoring
Option D:	Conditional Plan & Execution monitoring
Q17.	Uncertainty arises in the wumpus world because the agent's sensors give only _____
Option A:	Full & Global information
Option B:	Partial & Global Information
Option C:	Partial & local Information
Option D:	Full & local information
Q18.	How is Fuzzy Logic different from conventional control methods?
Option A:	IF and THEN Approach
Option B:	FOR Approach
Option C:	WHILE Approach
Option D:	DO Approach
Q19.	Which of the following does not include different learning methods?
Option A:	Memorization
Option B:	Analogy
Option C:	Introduction
Option D:	Deduction
Q20.	What are the possible values of the variable?
Option A:	Variables
Option B:	Literals
Option C:	Possible states of the world
Option D:	Discrete variable
Q. II	
A	Draw and explain tree of Tic-Tac Toe problem. [10 marks]

B	Differentiate between prepositional and predicate logic [10 marks]
Q III	
A	Write the short note on WUMPUS World environment. [10 marks]
B	What is the state space search? Formulate the state space search problem for 8-puzzle problem [10 marks]