

Program: BE Information Technology  
 Curriculum Scheme: Revised 2012  
 Examination: Fourth Year Semester VII  
 Course Code: BEITC703 and Course Name: Intelligent Systems  
 Time: 1 hour Max. Marks: 50

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

Q.	Question Statement	OPTION A:	OPTION B:	OPTION C:	OPTION D:
1	Which of the following concepts is not a characteristic of Artificial Intelligence	Learning Capability	Adapting to new environments	feeling depressed	able to process large amounts of data
2	Which of the following representations is used to represent the Agent conceptually	PACE	PEAS	PEAG	PAAS
3	Which of the following is a multi agent environment	8 puzzle	Towers of Hanoi	Water Jug problem	Chess
4	In the 8 puzzle problem which of the following is best way to represent a state	A list with number and positions	a 3 X 3 grid	a queue structure	a stack
5	Evaluation function for Best First Search	$f(n)=g(n)$	$f(n)=h(n)+g(n)$	$f(n)=h(n)$	$f(n)=h(n)*g(n)$
6	Which informed search algorithm avoids repeated states	SMA*	A* algorithm	AO*	Best search Algorithm
7	8 Queen problem solved by	Hill climbing Algo	A* algorithm	Greedy Search	AO* algorithm
8	Disadvantage of Hill Climbing algorithm	Local maxima	Global maxima	Maxima	shoulder
9	Cryptarithmic problem solved using	Constrain Satisfaction	BFS	A*	Hill Climbing
10	Which of the following statements correctly define knowledge representation in AI?	It is the way in which facts and information are stored in the storage system of the agent	It is the way in which we feed the knowledge in machine understandable form	we modify the knowledge and convert it into the format which is acceptable by the	It is the way an agent interact with KB
11	Which is created by using single propositional symbol?	Complex sentences	Atomic sentences	Composition sentences	None of the mentioned
12	Which is used to compute the truth of any sentence?	Semantics of propositional logic	Alpha-beta pruning	First-order logic	Both Semantics of propositional logic & Alpha-beta pruning
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14	A plan that describe actions in levels of increasing refinement is	Non-hierarchical plan	Hierarchical plan	Planning Represe	Problem Formulation

15	Conditional planning is used when?	Information is incomplete	Environment is changing	Environment is partially observable	Environment is static
16	what defines an empty plan in POP	Null states in it	A plan without any solution	A plan with start and end state	Plan Search
17	Agents may need to handle _____, whether due to partial observability, nondeterminism, or a combination of the two	Certainty	Determinism	Uncertainty	Certain Knowledge
18	What is $P(\text{NOT cavity} \mid \text{toothache})$	$1 - P(\text{cavity})$	$1 - P(\text{toothache})$	$1 - P(\text{cavity} \mid \text{toothache})$	$1 - P(\text{toothache} \mid \text{cavity})$
19	To assert conditional independence of the variables Toothache and Catch, given Cavity: $P(\text{Toothache}, \text{Catch}, \text{Cavity}) =$	$P(\text{toothache}) P(\text{Catch} \mid P(\text{Cavity}))$	$P(\text{Toothache} \mid \text{Cavity}) P(\text{Catch} \mid \text{Cavity}) P(\text{Cavity})$	$P(\text{Toothache} \mid \text{Cavity}) P(\text{Catch} \mid \text{Cavity}) P(\text{Cavity})$	$P(\text{Toothache}) P(\text{Catch} \mid \text{Cavity}) P(\text{Cavity})$
20	A network which is a probabilistic graphical model that represents a set of variables and their conditional dependencies via a directed acyclic graph (DAG)	Probabilistic Network	Markov Network	Bayesian Network	Conditional Network
21	The central component of knowledge-based agent is	Learning	Database	Knowledge Base	Gaming
22	The DECISION-TREE-LEARNING algorithm adopts:	Divide and conquer strategy	Dynamic programming	Greedy Algorithm	Brute force
23	Deep learning is a subfield of machine learning where concerned algorithms are inspired by the structured and function of the brain called _____.	Deep learning	Machine learning	Robotics	Artificial neural networks
24	Which of the following steps of the knowledge engineering process is complex and difficult?	Knowledge acquisition	Knowledge representation	Knowledge validation	Inferencing
25	_____ is a method in which an expert is asked to verbalise his thought process while solving a problem. Then these verbalisation are trapped and transcribed	Protocol Analysis	Observation	Structured Interviews	Knowledge Data Discovery Process