

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

Ramapuram Campus, BharathiSalai, Ramapuram, Chennai - 600089

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



QUESTION BANK

**DEGREE / BRANCH: B.TECH/CSE
VII SEMESTER**

18CSE358T– PATTERN RECOGNITION TECHNIQUES

Regulation – 2018

Academic Year 2021-22

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SUBJECT CODE/NAME : 18CSC305J–Artificial Intelligence

SEM/ YEAR: VI/III

UNIT V			
Expert system-Architecture- Pros and Cons of expert system- Rule based systems- Frame based expert system- Natural language processing-Levels of NLP- Syntactic and Semantic Analysis- Information retrieval- Information Extraction- Machine translation- NLP Applications- Advance topics in Artificial Intelligence-Cloud Computing and intelligent agent- Business intelligence and analytics- Sentiment Analysis- Deep learning Algorithms- Planning and logic in intelligent agents			
PART-A (Multiple Choice Questions)			
Q. No	Questions	Course Outcome	Competence BT Level
1	MYCIN falls under the category of a) Shell b) Rule-based expert system c) Frame based expert system d) None of these	5	1
2	The core part of decision making for the expert system lies in the a) Knowledge base b) Explanations c) Inference mechanism d) Facts	5	1
3	A rule of 'If you are wearing a cardigan, then it is cold' falls under the semantics of a) Recommendation b) Heuristic c) Relation d) Directive	5	1
4	A when needed method is invoked in frame based expert system a) By an event when changed b) In the decision making, as required c) By any action that need some data d) All of the above	5	1
5	The interpreters in expert systems are termed as a) Frames b) Explanations c) Shells	5	1

	d) None of the above		
6	The process of coding the knowledge in expert system is a) Knowledge base b) Knowledge engineering c) Knowledge acquisition d) None of the above	5	1
7	In fuzzy expert system, conversion is crisp value is done by a) Inference mechanism b) Defuzzification c) Composition d) Fuzzification	5	1
8	Semantic analysis is based on a) Transitive networks b) Context sensitive grammars c) Any grammars d) Knowledge representation	5	1
9	Which of the following checks the correctness of the sentence grammatically? a) ATN b) RTN c) Indexing d) Wrappers	5	1
10	In case grammar, the agent case is always a compulsory case with any verb. a) It as to be with dative b) The above statement is true c) The case grammar can have instrumental case too d) It depends on the verb	5	1
11	In which of the following, the context and the relations among the sentences are important? a) Conceptual dependency b) Case grammars c) Discourse and pragmatic processing d) None of the above	5	1
12	Suppose we want to identify fraud transactions in bank, under this scenario, we would look up on a) High precision b) High Recall c) Precision and recall = 1 value d) None of the above	5	1
13	Which of the text pre processing task would return 'learn' if the input word is 'learnt'? a) Text standardisation b) Term stripping c) Stemming d) None of the above	5	1
14	Which of the following does not exist in the Boolean model? a) Ranking	5	1

	b) Weighting c) Indexing d) All of these		
15	Pattern analytics intends to a) Hide the meaningful patterns for processing b) Select the useful patterns and study them c) Discover the meaningful patterns d) All the above	5	1
16	Sentiment analysis is not about a) Finding the opinion about the person on some product b) Determining the polarity from the text c) Feature based sentiment classification d) Finding sentiments in the text	5	1
17	Which of the statement is not true about big data? a) It discovers hidden patterns from a variety of data b) Analytics of big data helps in better business decisions c) Hadoop, NoSQL and MapReduce are the technologies associated with it d) Social media activity, web logs are data sources for big data i)	5	1
18	Which of the following includes major tasks of NLP? a) Automatic summarization b) Discourse analysis c) Machine translation d) All the above	5	1
19	What is meant by compositional semantics? a) Determining the meaning b) Logical connectives c) Semantics d) None of the above	5	1
20	What is meant by quasi logical form? a) Sits between syntactic and logical form b) Logical connectives c) All the above d) None of the above	5	1
21	Among the given options, which search algorithm requires less memory? a) Optimal search b) Depth first search c) Breadth first search d) Linear search	5	1
22	Which algorithm is used in the game tree to make decision of win/Lose? a) Heuristic search algorithm b) DFS/BFS algorithm c) Greedy search Algorithm d) Min/Max algorithm	5	1
23	The component of an expert system is a) Knowledge base	5	1

	b) Inference engine c) User interface d) All the above		
24	Which rule is applied for the simple reflex agent? a) Simple action rule b) Simple and condition action rule c) Condition action rule d) None of the above	5	1
25	Which agent deals with happy and unhappy states? a) simple reflex agent b) model based agent c) learning agent d) utility based agent	5	1
PART-B(4 MARKS)			
1	Discuss the expert system frame work?	5	1
2	What are shells and explanations?	5	1
3	What are frame based expert systems?	5	1
4	List out the possible advantages of using semantic grammar	5	1
5	What is pattern analytics? Explain with an example?	5	1
6	Explain the factors than an intelligent agent needs to handle in concurrent engineering	5	1
7	What are frame based expert systems?	5	1
8	Can parsing be related to a search problem? Discuss	5	1
9	List out the benefits of expert systems?	5	1
10	Why is there a need to have efficient knowledge acquisition systems?	5	1
PART-C (12 MARKS)			
1	Develop an expert system for library that would recommend book for its project work. Assume suitable data.	5	2
2	Write a program to associate different news in newspaper and prioritise them with reference to your context.	5	3
3	Develop the retrieval system using indexing technique for some set of text documents.	5	2
4	Explain the different levels of natural language processing.	5	3
5	With a neat sketch, explain the architecture, characteristic features and roles of expert system.	5	3
6	Write in detail about the process of information extraction and Machine translation	5	3
7	Compare the convolutional neural networks, recurrent neural networks and summarize their pros and cons.	5	3

Note:

1. BT Level – Blooms Taxonomy Level

2. CO – Course Outcomes

BT1 – Remember BT2 – Understand BT3 – Apply BT4 – Analyze BT5 – Evaluate BT6 – Create