

Department of CSE (AI&ML)

B. Tech. Mid Question Bank (R20 Regulation)

Academic Year: 2024-2025

Semester: VII

Subject Name: Information Retrieval Systems

Faculty Name: Mr. Ramesh A

PART-A

Q.No	Questions	Marks	BL	CO	Unit No
1	Define information retrieval process.	2M	L1	CO1	I
2	What are the functions of IRS?	2M	L2	CO1	I
3	Compare information retrieval and data retrieval.	2M	L2	CO1	I
4	Write short note on Proximity searches.	2M	L2	CO1	I
5	Define Precision and Recall.	2M	L1	CO1	I
6	Define Relevance Feedback.	2M	L1	CO1	I
7	List of text processing phases in IRS.	2M	L1	CO2	II
8	What is the purpose of data structure in IRS?	2M	L2	CO2	II
9	List the two processes associated with information extraction.	2M	L1	CO2	II
10	Define information extraction with one example.	2M	L1	CO2	II
11	Define Signature file structure.	2M	L1	CO2	II
12	What is canned query?	2M	L1	CO2	II
13	What is automatic indexing?	2M	L2	CO3	III
14	What is statistical indexing?	2M	L2	CO3	III
15	Write short notes on manual clustering.	2M	L3	CO3	III
16	Define selective dissemination of information search.	2M	L1	CO3	III
17	Write short notes on Hidden Markov model techniques.	2M	L3	CO3	III
18	What is ranking?	2M	L2	CO3	III
19	What is similarity measure?	2M	L2	CO4	IV
20	Define information visualization.	2M	L1	CO4	IV
21	Define item clustering.	2M	L1	CO4	IV
22	Define a Web Crawler.	2M	L1	CO4	IV
23	Define relevance feedback.	2M	L1	CO4	IV
24	Define Agglomerative hierarchical clustering.	2M	L1	CO4	IV
25	List the software text search algorithms.	2M	L2	CO5	V
26	Write short notes on Image Retrieval.	2M	L5	CO5	V
27	Write short notes on hardware text search algorithms.	2M	L3	CO5	V
28	What is brute force approach?	2M	L2	CO5	V
29	Define finite state automata.	2M	L1	CO5	V
30	Write short notes on graph retrieval.	2M	L3	CO5	V

Q. No	Questions	Marks	BL	CO	Unit No
1	Explain about objectives of Information Retrieval Systems.	6M	L2	CO1	I
2	Explain about Information Retrieval System Capabilities <ul style="list-style-type: none"> ➤ Querying ➤ Browsing ➤ Miscellaneous Capabilities 	6M	L2	CO1	I
3	Explain about Digital Libraries and Data warehouses with list of software.	6M	L2	CO1	I
4	Explain briefly about functional overview. Draw with figure.	3M	L2	CO1	I
5	Explain the functional processes, item normalization and Selective Dissemination of Information.	3M	L2	CO1	I
6	Evaluate different browse capabilities of information retrieval system.	3M	L5	CO1	I
7	Explain the Boolean logics.	3M	L2	CO1	I
8	Summarize the vocabulary Browse, Searches history log and Canned Query Capabilities of IRS.	3M	L2	CO1	I
9	Clearly discuss the relevance of Information Retrieval Systems in the context of Digital Libraries and Data Warehouses.	3M	L2	CO1	I
10	Explain briefly about Indexing process. Draw with Text processing of Flowchart.	6M	L2	CO2	II
11	Explain briefly about Data Structures.	6M	L2	CO2	II
12	Explain the terms Exhaustively, specificity, Preordination and Post coordination with Suitable example.	6M	L2	CO2	II
13	Explain about Inverted File Structure with Example.	3M	L2	CO2	II
14	Write Short notes N- Gram Data Structures.	3M	L1	CO2	II
15	Demonstrate Porter Stemming Algorithm with example.	3M	L3	CO2	II
16	Explain Dictionary Lookup Stemmers and how they improve the efficiency of IRS.	3M	L2	CO2	II

17	Explain cut-off method, entropy method, peak and plateau method.	3M	L2	CO2	II
18	Discuss Porter Stemming algorithm.	3M	L2	CO2	II

19	Explain briefly about Automatic Indexing. Explain about types of classes Automatic Indexing.	3M	L2	CO3	III																																																																																																				
20	What is Thesaurus Generation? Explain briefly about Thesaurus Generation.	3M	L2	CO3	III																																																																																																				
21	<p>Consider the following Term-Term matrix</p> <table border="1" data-bbox="279 598 841 940"> <thead> <tr> <th></th> <th>T1</th> <th>T2</th> <th>T3</th> <th>T4</th> <th>T5</th> <th>T6</th> <th>T7</th> <th>T8</th> <th>T9</th> </tr> </thead> <tbody> <tr> <th>T1</th> <td>-</td> <td>14</td> <td>9</td> <td>0</td> <td>3</td> <td>0</td> <td>12</td> <td>0</td> <td>16</td> </tr> <tr> <th>T2</th> <td>14</td> <td>-</td> <td>0</td> <td>6</td> <td>4</td> <td>0</td> <td>14</td> <td>0</td> <td>11</td> </tr> <tr> <th>T3</th> <td>9</td> <td>0</td> <td>-</td> <td>12</td> <td>7</td> <td>4</td> <td>1</td> <td>0</td> <td>14</td> </tr> <tr> <th>T4</th> <td>0</td> <td>6</td> <td>12</td> <td>-</td> <td>3</td> <td>0</td> <td>14</td> <td>9</td> <td>8</td> </tr> <tr> <th>T5</th> <td>3</td> <td>4</td> <td>7</td> <td>3</td> <td>-</td> <td>12</td> <td>6</td> <td>16</td> <td>0</td> </tr> <tr> <th>T6</th> <td>0</td> <td>0</td> <td>4</td> <td>0</td> <td>12</td> <td>-</td> <td>9</td> <td>2</td> <td>9</td> </tr> <tr> <th>T7</th> <td>12</td> <td>14</td> <td>1</td> <td>14</td> <td>6</td> <td>9</td> <td>-</td> <td>0</td> <td>12</td> </tr> <tr> <th>T8</th> <td>0</td> <td>0</td> <td>0</td> <td>9</td> <td>16</td> <td>2</td> <td>0</td> <td>-</td> <td>8</td> </tr> <tr> <th>T9</th> <td>16</td> <td>11</td> <td>14</td> <td>8</td> <td>0</td> <td>9</td> <td>12</td> <td>8</td> <td>-</td> </tr> </tbody> </table> <p>i) Determine the term clustering relationship matrix using a threshold of 10 or higher. ii) Determine the clusters using Single Link technique iii) Determine the clusters using Clique technique</p>		T1	T2	T3	T4	T5	T6	T7	T8	T9	T1	-	14	9	0	3	0	12	0	16	T2	14	-	0	6	4	0	14	0	11	T3	9	0	-	12	7	4	1	0	14	T4	0	6	12	-	3	0	14	9	8	T5	3	4	7	3	-	12	6	16	0	T6	0	0	4	0	12	-	9	2	9	T7	12	14	1	14	6	9	-	0	12	T8	0	0	0	9	16	2	0	-	8	T9	16	11	14	8	0	9	12	8	-	3M	L5	CO3	III
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22	Why are there three levels of binding in the creation of search?	3M	L2	CO3	III																																																																																																				
23	Explain about the Cognition and perception.	3M	L2	CO3	III																																																																																																				
24	Explain about the weighted searches of Boolean systems one problem.	3M	L2	CO3	III																																																																																																				
25	Explain about Relevance Feedback in Relational Model with neat figure of positive feedback & Negative Feedback.	6M	L2	CO4	IV																																																																																																				
26	Explain briefly about Selective Dissemination of Information Search.	6M	L2	CO4	IV																																																																																																				
27	Explain various Information Visualization Techniques.	6M	L1	CO4	IV																																																																																																				
28	Explain Boyer-Moore algorithm in searching.	3M	L2	CO4	IV																																																																																																				
29	Explain in detail about vector-space retrieval models with an example.	3M	L2	CO4	IV																																																																																																				
30	Explain Agglomerative clustering with example.	3M	L2	CO4	IV																																																																																																				
31	Explain K-means algorithm with example.	3M	L2	CO4	IV																																																																																																				
32	Explain Naive Bayes classifiers with an example.	3M	L2	CO4	IV																																																																																																				
33	Explain briefly about Selective Dissemination of Information Search.																																																																																																								
34	Discuss the Text Search Techniques using Text	6M	L2	CO5	V																																																																																																				

	Streaming Architecture.				
35	Explain briefly about Hardware Text Search Algorithms.	6M	L2	CO5	V
36	Explain briefly about i. Imagery Retrieval ii. Video Retrieval iii. Graph Retrieval	6M	L2	CO5	V
37	Define text search algorithm and list of techniques.	3M	L1	CO5	V
38	Explain about the measures used in system evaluation.	3M	L2	CO5	V
39	Explain about multimedia information retrieval systems and their applications.	3M	L2	CO5	V
40	Discuss about the Non-speech audio retrieval and its applications.	3M	L2	CO5	V
41	Briefly describes the Aspects of Visualization process.	3M	L2	CO5	V
42	Discuss the imagery retrieval features that can be used in context based indexing.	3M	L2	CO5	V