Course Code:1950548 Roll No: MLRS- R19

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
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III B.Tech I Sem Supply End Examination, July 2022

Information Retrieval Systems

(CSE)

Time: 3 Hours. **Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.
2. In Part– A, answer all questions which carries 20 marks.
3. In Part – B, answer any one question from each unit.
Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks=20Marks)

1.	a)	Define information retrieval system.	2M	CO1	BL1
	b)	List the objectives of information retrieval system.	2M	CO1	BL1
	c)	What are the objectives of indexing?	2M	CO2	BL1
	d)	Write examples of bigram and trigram.	2M	CO2	BL2
	e)	What is concept indexing?	2M	CO3	BL1
	f)	Write example for KWOC and KWIC.	2M	CO3	BL2
	g)	Define relevance feedback.	2M	CO4	BL1
	h)	What are the benefits of information visualization?	2M	CO4	BL1
	i)	List the components of hardware text search systems.	2M	CO5	BL1
	j)	What do you mean by Non-speech audio retrieval?	2M	CO5	BL2

PART- B

(10*5 Marks = 50 Marks)

2	a)	Illustrate functional overview of information retrieval system in detail.	5M	CO1	BL2
	b)	Discuss the relationship of information retrieval systems with dbms, digital libraries and data warehouses.	5M	CO1	BL2
		OR			
3		Analyze the importance of search capabilities and browse capabilities in information retrieval system.	10M	CO1	BL4
4	a)	Compare inverted file structure and signature file structure.	5M	CO2	BL2
	b)	Explain information extraction process.	5M	CO2	BL2
		OR			
5		Apply the Porter stemming algorithm for the following words: irreplaceable, informative, activation, and triplicate.	10M	CO2	BL3

6	a)	Discuss the advantages and disadvantages of using a statistical approach, a natural language approach and concept indexing approach to create index for set of documents.	5M	CO3	BL2
	b)	Differentiate single link, the clique and the star cluster methods.	5M	CO3	BL4

OR

7		Given Term-Document matrix apply item clustering algorithm to compute clusters.	10M	CO3	BL3

	Term1	Term2	Term3	Term4	Term5	Term6	Term7	Term8
Doc1	0	4	0	0	0	2	1	3
Doc2	3	1	4	3	1	2	0	1
Doc3	3	0	0	0	3	0	3	0
Doc4	0	1	0	3	0	0	2	0
Doc5	2	2	2	3	1	4	0	2

8	a)	Apply cosine similarity measure and Jaccard coefficient to compute similarity between document and query.	5M	CO4	BL3
	b)	Discuss the importance of information visualization process.	5M	CO4	BL2

OR

9		Analyze the importance of using relevance feedback mechanism in information retrieval process with suitable example.	10M	CO4	BL4
10	a)	Discuss the importance of hardware text search systems.	5M	CO5	BL2
	b)	Explain Video retrieval process.	5M	CO5	BL2

OR

11		Apply Boyer-Moore algorithm to perform pattern matching in order to optimize text search.	10M	CO5	BL3

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