

Total No. of Questions : 8]

SEAT No. :

PE2440

[Total No. of Pages : 2

[6584] 390

B.E.(AI & DS)

INFORMATION RETRIEVAL

(2019 Pattern) (417524B) (Semester -VII) (Elective-IV)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Attempt Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Assume suitable data if necessary.

- Q1)** a) Define and explain Probabilistic Retrieval. [6]
b) What is the binary independent retrieval model? [6]
c) Explain types of language models. [6]

OR

- Q2)** a) List and explain the challenges in Natural language processing. [6]
b) State and explain different types of Bayesian networks? [6]
c) Explain with suitable example different levels of NLP. [6]

- Q3)** a) What is the difference between clustering and classification? Can clustering be used for classification purposes. [6]
b) What are different types of clustering algorithm? Explain any one of them. [5]
c) Explain in detail about naïve Bayes algorithm and its application in text classification. [6]

OR

- Q4)** a) What is K nearest neighbor classifier with an illustration in information retrieval? [6]
b) Explain Mixture of Gaussians Model. [5]
c) Solve Agglomerative hierarchical clustering for single link with example. [6]

P.T.O.

- Q5)** a) Describe MapReduce with example [6]
b) Discuss the factors that influence a webpage's PageRank score. Discuss the challenges involve in web search engine. [5]
c) Define Python library is used for web crawling. [6]

OR

- Q6)** a) Explain Simple Ranking Functions in detail. [6]
b) What are the Main challenges posed by Web? [5]
c) Explain the components of focused web crawlers. [6]

- Q7)** a) Explain multimedia IR models. [9]
b) What are the four phases of recommender system? [9]

OR

- Q8)** a) What are the different evaluation metric for Recommender system. [9]
b) What is the difference between information retrieval and recommender system? [9]