Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 10429

M.E/M.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Elective

Big Data Analytics

CP 4093 – INFORMATION RETRIEVAL TECHNIQUES

(Common to : M.E. Computer Science and Engineering/M.E. Computer Science and Engineering (With Specialization in Artificial Intelligence and Machine Learning)/ M.E. Software Engineering/M.Tech. Information Technology)

(Regulations 2021)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is ad hoc retrieval?
2. Define Web crawling.
3. Outline a Boolean expression with an example.
4. What is stemming? Give example.
5. Outline pattern matching with an example.
6. Write a note on relevance feedback.
7. Outline a first in, first out queue with an example.
8. What is MapReduce?
9. Outline a hyperlink with an example.
10. What is a digital library?

PART B — (5 × 13 = 65 marks)

11. (a) What is information retrieval? Elaborate the general architecture of an information retrieval system with a diagram. (13)

Or

(b) What is a search engine? Elaborate the components of a search engine with a diagram. (13)

12. (a) Present an outline the Boolean model and present the steps in processing Boolean queries with an example. (13)

Or

(b) State the probability ranking principle. Outline how the probabilistic retrieval model can be used to retrieve information with an example. (13)

13. (a) What is an inverted index in information retrieval? Elaborate static and dynamic indices with an example and a diagram. (13)

Or

(b) What is query processing? Outline the steps in query processing with an example. (13)

14. (a) (i) Outline precision and recall with an example. (6)

(ii) What is query scheduling? Outline with an example. (7)

Or

(b) What is parallel information retrieval? Elaborate the architecture of a parallel information system with a diagram. (13)

15. (a) How dynamic ranking differs from static ranking? Elaborate the steps in dynamic ranking with an example. (13)

Or

(b) What is XML? Outline the tree representation of XML documents and queries with an example. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Elaborate the challenges in building large-scale information retrieval systems. (15)

Or

(b) Elaborate the steps in parallel query processing with appropriate examples. (15)
