DSE-1C	BCS-E501B	DATA MINING	L	C	CIA	ESE	Time for ESE
			4	4	30	70	3Hrs.

PREREQUISITES	:	Knowledge of Database Management System (DBMS)
COURSE OBJECTIVES/ LEARNING OUTCOMES	:	Upon successful completion of this course, the student will be able to: • Identify data mining functionalities • Identify data warehousing functionalities • Apply data preprocessing techniques - data cleaning, data integration and transformation, data reduction, discretization, and concept hierarchy generation • Describe data warehousing and data mining architectures

NOTE: The question paper shall consist of three sections (Sec.-A, Sec.-B and Sec.-C). **Sec.-A** shall contain 10 objective type questions of one mark each and student shall be required to attempt all questions. **Sec.-B** shall contain 10 short answer type questions of four marks each and student shall be required to attempt any five questions. **Sec.-C** shall contain 8 descriptive type questions of ten marks each and student shall be required to attempt any four questions. Questions shall be uniformly distributed from the entire syllabus. The previous year paper/model paper can be used as a guideline and the following syllabus should be strictly followed while setting the question paper.

Overview: The process of knowledge discovery in databases, predictive and descriptive data mining techniques, supervised and unsupervised learning techniques. **15L**

Techniques of Data Mining: Link analysis, predictive modeling, database segmentation, score functions for data mining algorithms, Bayesian techniques in data mining. **20L**

Issues in Data Mining: Scalability and data management issues in data mining algorithms, parallel and distributed data mining, privacy, social, ethical issues in KDD and data mining, pitfalls of KDD and data mining. **25L**

BOOKS RECOMMENDED :

1. Margaret H. Dunham, Data Mining: Introductory and Advanced Topics, Pearson, 2002.
2. Jiawei Han and Micheline Kamber, Data Mining: Concepts and Techniques, 2nd Ed., Morgan Kaufmann, 2006.
3. Arun Pujari, Data Mining Techniques, University Press, 2001.
4. D. Hand, H. Mannila and P. Smyth, Principles of Data Mining, Prentice-Hall of India, 2006.
5. G.K. Gupta, Introduction to Data Mining with Case Studies, Prentice-Hall of India, 2006.