

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MTECH/PRE-PHD
BRANCH: CS/IT/IS

SEMESTER: II/NA
SESSION: SP/19

SUBJECT: IT516 DATA MINING AND DATA ANALYSIS

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) What is data cube? Give the uses of multifeature cubes? [5]
Q.1(b) What is an OLAP database? Compare OLTP and OLAP systems. [5]
- Q.2(a) What are the various sources for data warehouse? Differentiate data mining and data warehousing. [5]
Q.2(b) Discuss the issues to consider during data mining. Also, give your idea to alleviate these issues. [5]
- Q.3(a) What is the need for preprocessing the data? Mention some approaches to preprocess data. [5]
Q.3(b) What approach is taken by decision tree for knowledge learning? Explain the learning strategy adopted in decision tree-based learner. [5]
- Q.4(a) What do you know about association rule mining? List two interesting measures for association rules. [5]
Q.4(b) What is ensemble learning? Explain standard strategies to make ensemble learner. [5]
- Q.5(a) List the requirements of clustering in data mining. What is the objective function of the K-means algorithm? [5]
Q.5(b) What is dimension? Define *outliers*. List various outlier detection approaches. [5]

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