JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-1 EXAMINATION

M-Tech (1st SEM)

Course Code: 22M1WCI131 Max. Marks: 15

Course Name: Data Warehousing & Data Mining Max. Time: 1 Hour

Course Credit: 2

Note: All questions are compulsory

Q. No. 1 Classify the following attributes as binary, discrete, or continuous. Also classify them as qualitative (nominal or ordinal) or quantitative (interval or ratio). Some cases may have more than one interpretation, so briefly indicate your reasoning if you think there may be some ambiguity. **[.5 *10] [CO-1]**

Example: Age in years. Answer: Discrete, quantitative, ratio

1. Brightness as measured by a light meter.
2. Brightness as measured by people's judgments.
3. Angles as measured in degrees between 0 and 360.
4. Bronze, Silver, and Gold medals as awarded at the Olympics.
5. Number of patients in a hospital.
6. ISBN numbers for books.
7. Ability to pass light in terms of the following values: opaque, translucent, transparent.
8. Distance from the centre of campus.
9. Density of a substance in grams per cubic centimetre.
10. Coat check number (Token). (When you attend an event, you can often give your coat to someone who, in turn, gives you a number that you can use to claim your coat when you leave.)

Q. No. 2 (a) How is data mining associated with knowledge discovery? Explain different steps involved in KDD process in detail illustrating with a flow diagram. **[4 + 2] [CO-1]**

(b) List and explain characteristics of a data warehouse.

Q. No. 3 (a) Discuss in details problems associated with data quality in data mining. List different data quality problems and discuss how these can be handled. **[2+2] [CO-2]**

(b) What is curse of dimensionality? Discuss the differences between dimensionality reductions based on aggregation and dimensionality reduction based on techniques such as PCA. **[CO-2]**