S.No. : 75

CCML / ITBC 3501

No. of Printed Pages : 05

Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 33805 Roll No. [redacted]

B. Tech. Examination, 2024-25

(Odd Semester)

PREDICTIVE ANALYTICS

Time : Three Hours] *[Maximum Marks : 60*

Note :– Attempt all questions.

SECTION – A

1. Attempt all parts of the following : 8×1=8

(a) What is the definition of business analytics?

(b) How does predictive analytics transform data into future insights?

(c) What does the term "unit of analysis" mean?

(d) What is CLEM expression in data analytics?

[P. T. O.

(e) What are the main components of IBM Watson studio?

(f) What is the purpose of Watson machine learning?

(g) How is IBM SPSS modeler used for prediction?

(h) What steps are involved in creating a case study with IBM Watson?

SECTION – B

2. Attempt any two parts of the following : 2×6=12

(a) Define business analytics and explain how it helps enterprises make data-driven decisions. Provide real-time examples to support your answer.

(b) Explain the concept of the "unit of analysis" and its importance in data analytics. Discuss the various types, such as "distinct", "aggregate" and "SetToFlag".

(c) Describe the components of IBM Watson studio and their roles in predictive analytics. Include an example of how they can be used in a business context.

(d) Explain the process of building a case study using IBM Watson studio. Include steps such as data preparation, model building and evaluation.

SECTION – C

Note :– Attempt all questions. Attempt any two parts from each questions. 8×5=40

3. (a) What is the CRISP-DM methodology in data mining? Elaborate on its phases and their significance in a data mining project.

(b) Describe the purpose of IBM SPSS modeler in data mining. What are its key features and benefits for businesses?

(c) Explain the evolution of analytics trends from the past to the present and how they shape the future of predictive enterprises.

4. (a) How does integrating data from different sources enhance the accuracy of analytics? Provide examples of tools or techniques used for data integration.

(b) Describe the importance of identifying relationships between two fields in a dataset. How does this process impact the outcome of a predictive model?

(c) Explain the process of setting a modeling objective. Why is it critical to align it with business goals?

5. (a) What is Watson machine learning? How does it leverage algorithms and data to create predictive models?

(b) Explain the concept of AutoAI in IBM Watson studio. How does it simplify the process of building machine learning models?

(c) Discuss how neural network modeling is implemented in Watson studio. Provide an example of a use case where neural networks are particularly effective?

6. (a) Discuss how predictive analytics transforms raw data into actionable future insights. Highlight its applications across different industries.

(b) How can IBM SPSS modeler be used to develop predictive analytics models? Discuss its key features and steps involved in a project.

(c) Discuss the challenges of working with real-world datasets in predictive analytics projects. How can these challenges be addressed using IBM SPSS and Watson studio?

⌘⌘⌘