

Total No. of Questions : 10]

SEAT No. :

**P3121**

**[5154]-688**

[Total No. of Pages : 3

**B.E. (Computer Engineering)**  
**BUSINESS ANALYTIC AND INTELLIGENCE**  
**(2012 Pattern) (Semester -II) (Elective-IV (A))**  
**(End Sem.) (410452A)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Assume suitable data, if necessary.*
- 4) *Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.*

- Q1)** a) Explain Business Intelligence Cycle with suitable diagram. [5]  
b) What are the factors responsible for successful Business Intelligence project. [5]

OR

- Q2)** a) Explain Decision Support System with its limitations. [5]  
b) Explain any one application of Decision Support System in detail. [5]

- Q3)** a) Explain the data warehouse architecture with its components. [5]  
b) Differentiate between Snowflake schema and Fact Constellation (Galaxy) Schema with suitable example. [5]

OR

- Q4)** a) Describe top down approach for designing Data warehouse. [5]  
b) Explain the Extract-Transform-Load (ETL) process. [5]

- Q5)** a) What is the need of data pre-processing? Explain various data transformation techniques. [6]  
b) Explain concept hierarchy generation for categorical data. [5]  
c) Explain HOLAP and DOLAP in detail. [6]

OR

*P.T.O.*

- Q6)** a) Explain clustering-based outlier analysis. [6]
- b) Suppose that the data for analysis includes the attribute age. The age values for the data tuples are (in increasing order) 13,15,16,16,19,20,20,21,22,22,25,25,25,25,30,33,33,35,35,35,35,36,40,45,46,52,70. [6]
- i) What is the mean of the data?
- ii) What is the mode of the data? Comment on the data's modality (i.e., bimodal, trimodal, etc.)
- iii) Give the five-number summary of the data.
- c) Discuss different methods for handling noisy data in the data cleaning process. [5]

- Q7)** a) Explain the important factors to consider while planning for availability of Business Intelligence system. [8]
- b) Write short note on business continuity. [5]
- c) Explain the term "Resilience" in the context of business continuity. [4]

OR

- Q8)** a) Explain Security Management in terms of Business Intelligence infrastructure. [6]
- b) Explain the usage of Business Intelligence tools to handle Business Intelligence Infrastructure. [6]
- c) Explain steps in designing business Intelligence system. [5]
- Q9)** a) Explain Business Analytics with suitable example. [6]
- b) Assume a suitable banking database and use appropriate Business Intelligence technique to classify whether the customer is eligible to get the loan or not. [6]
- c) How Business Intelligence is applied in CRM? [4]

OR

**Q10)** Explain the applications of Business Intelligence in:

- a) Fraud Detection. [5]
- b) Telecommunications. [5]
- c) Market Basket Analysis. [6]

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