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**Question Paper Code : 90442**

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2025.

Fifth/Sixth/Seventh/Eighth Semester

Computer Science and Engineering

CCS 341 — DATA WAREHOUSING

(Common to : Computer Science and Design/Computer Science and Engineering (Artificial Intelligence and Machine Learning)/Computer Science and Engineering (Cyber Security)/Computer and Communication Engineering/Electrical and Electronics Engineering/Artificial Intelligence and Data Science/Computer Science and Business Systems/Information Technology)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is Retrospective analysis? Give an example
2. How does data mart differ from meta data?
3. Give any two features of MOLAP.
4. What is ETL?
5. Why do we need partitioning strategy?
6. How transactional databases differ from data marts?
7. What is Schema?
8. List out any two data warehouse tools.
9. Why tuning a data warehouse is a difficult procedure?
10. Mention the important role of a system database manager.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Explain the data warehouse components. (8)  
(ii) Compare and Contrast autonomous and Snowflake data warehouse. (5)

Or

- (b) Describe the three tier data warehouse architecture using a real time example.
12. (a) (i) Discuss the characteristics of OLAP. (7)  
(ii) Among the ROLAP, MOLAP and HOLAP, Which one you would prefer? Why? (6)

Or

- (b) (i) Explain the types of data warehouses. (5)  
(ii) Brief the OLAP operations. (8)
13. (a) (i) How do you design a cost effective data mart? Explain with an example. (8)  
(ii) Discuss the need of data mart. (5)

Or

- (b) (i) Elucidate the challenges for meta managements. (8)  
(ii) State the significance of meta data repository. (5)
14. (a) (i) Draw and explain star schema for a banking system. (10)  
(ii) What is data cube? (3)

Or

- (b) (i) Explain the data warehouse tools. (10)  
(ii) What do you mean by data base parallelism? (3)
15. (a) (i) Discuss the role of system configuration manager. (5)  
(ii) When the service of the system event manager is required? Explain with an example. (8)

Or

- (b) (i) Explain the function of the load manager. (7)  
(ii) Discuss the different testing mechanisms. (6)

PART C — (1 × 15 = 15 marks)

16. (a) (i) Among vertical and horizontal partitioning, which one will you prefer? Why? Justify your answer with suitable example. (10)
- (ii) Explain the phases of delivery process. (5)

Or

- (b) (i) A shop wants to create a sales data warehouse to keep records of the store's sales for the dimension time, item, and location. These dimensions allow the store to keep track of things, for example, monthly sales of items and the locations at which the items were sold. Create a multidimensional data model for the above case. Assume your own additional requirements. (10)
- (ii) Explain the importance of data normalization. (5)
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