

**2025**

**DATABASE MANAGEMENT SYSTEM AND  
SYSTEM ANALYSIS AND DESIGN — GENERAL**

**Paper : DSE-5.2eBG**

**Full Marks : 80**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**Module - I**

**(Database Management System)**

**Group - A**

- |  |     |
|--|-----|
| 1. What do you mean by Data Definition Language? State its two features. | 2+2 |
| 2. Differentiate between BCNF and 3NF.                                   | 4   |
| 3. Write a short note on Data Control Language.                          | 4   |

*Or*

What are the drawbacks of SQL? 4

- |  |   |
|--|---|
| 4. Explain the significance of Indexing in DBMS. | 4 |
|--|---|

*Or*

Discuss the concept of Normalisation in DBMS. 4

**Group - B**

- |  |   |
|--|---|
| 5. Describe the Relational DBMS model with a suitable diagram. | 6 |
|--|---|

*Or*

Explain the phases of Database Design. 6

- |   |   |
|---|---|
| 6. Create the ER diagram of a women's cricket team participating in the Women's World Cup 2025. The entities are— | 6 |
| (a) Country Name  |   |
| (b) Coach Name  |   |
| (c) Players.  |   |

**Please Turn Over**

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7. Briefly explain the primary and secondary indexing. 3+3
8. Describe the various data optimisation techniques. 6

*Or*

Explain the concept of embedded SQL. 6

**Module - II**

**(System Analysis and Design)**

**Group - C**

9. Briefly describe the Spiral Model. 4
10. What is meant by Regression Testing? 4

*Or*

What is the significance of Test Case Generation? 4

**Group - D**

11. State the importance of Decision Table. 5
12. Write a short note on Data Dictionary. 5
13. Discuss the role of logical data flow diagram in process modelling. 5

*Or*

What is the need of having a structured chart? 5

14. What do you mean by project description? 5

*Or*

Discuss the bottom-up approach of system design. 5

**Group - E**

15. What is the need for problem definition and analysis in system design? 6
16. Explain the technique of Integration Testing. 6

*Or*

Describe the major steps involved in developing a system. 6