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**4003CSC23-C**  
**B.Sc. (HONOURS) (CBCS) DEGREE EXAMINATIONS, APRIL/MAY - 2025**  
**(Examination at the end of Fourth Semester)**  
**PART - II : COMPUTER SCIENCE**  
**Data Communications and Computer Networks**  
**(Regulation 2023-24)**

Time : 3 Hours

Maximum Marks : 70

**SECTION - A**

Write short answers for any Five of the following questions. Each question carries 4 marks. (5×4=20)

1. Write about Network hardware and software.
2. Write the Error detection and correction.
3. Write about Network layer design issues.
4. Write the elements of transport protocol.
5. Explain Domain name system.
6. Write about Ethernet.
7. What are the wireless LAN.
8. Write about Telnet.

**SECTION - B**

Write answers for the following Five questions. Each question carries 10 marks. (5×10=50)

9. a) Explain OSI, TCP/IP.  
(OR)  
b) Explain Guided transmission media.
10. a) Explain HDLC.  
(OR)  
b) Explain about data Link layer switching.

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11. a) Explain about routing algorithms.

(OR)

b) Explain about congestion control algorithms.

12. a) Explain about transport service.

(OR)

b) Explain Internet transport layer protocols : UDP and TCP.

13. a) Explain about web : architectural overview.

(OR)

b) Explain about simple mail transfer protocols.

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4007CAP23-C  
B.Com. (HONOURS) (CBCS) DEGREE EXAMINATIONS,  
APRIL/MAY - 2025  
(Examination at the end of Fourth Semester)  
PART-II : COMPUTER APPLICATIONS  
DBMS with Oracle  
(Regulation 2023-2024)

Time : 3 Hours

Maximum Marks : 70

SECTION - A

I. Answer any Five of the following questions. (5×4=20)

1. What is Database System? Explain database applications.
2. Explain Centralized and Client Server architecture for the database.
3. Explain about relational model.
4. Explain functional dependency.
5. Explain about constraints in relational data Model.
6. Explain about aggregation in SQL
7. Write about relational set operations.
8. Explain about PL/SQL Block structure

SECTION - B

II. Answer any One question from each unit. (5×10=50)

UNIT - I

9. Write about Advantages of Database systems.

(OR)

10. What is Datamodel? Explain Types of Data models.

UNIT - II

11. Explain Codd's rules

(OR)

12. What is normal form? Explain 1NF, 2NF, 3NF, BCNF.

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**UNIT - III**

13. Explain Building blocks of an ERD.

**(OR)**

14. Explain about DDL and DML operations in SQL.

**UNIT - IV**

15. Explain about types of Joins in SQL.

**(OR)**

16. Explain TCL commands in SQL.

**UNIT - V**

17. Explain Exception Handling in PL/SQL.

**(OR)**

18. Explain Serializability and Testing for Serializability.

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**4003CSC23-B**  
**B.Sc. (HONOURS) (CBCS) DEGREE EXAMINATIONS, APRIL/MAY - 2025**  
**(Examination at the end of Fourth Semester)**  
**PART - II : COMPUTER SCIENCE**  
**Object Oriented Software Engineering**  
**(Regulation 2023-24)**

Time : 3 Hours

Maximum Marks : 70

**SECTION - A**

Write short answer for any Five of the following questions. Each question carries 4 marks. (5×4=20)

1. Explain object oriented programming concepts.
2. Explain software development process.
3. Explain use cases and scenarios of requirements analysis.
4. Write about Design patterns.
5. Explain Test-driven development.
6. Explain object-oriented design principles.
7. Explain software maintenance basics.
8. Explain model-driven Engineering.

**SECTION - B**

Write answer for the following Five questions. Each question carries 10 marks. (5×10=50)

9. a) Explain unified modelling language basics.  
(OR)  
b) Explain software development life cycle.
10. a) Explain object-oriented analysis and design.  
(OR)  
b) Explain UML modelling techniques.

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11. a) Explain object oriented programming languages.

(OR)

b) Explain software testing basics.

12. a) Explain code review and inspection.

(OR)

b) Explain software evolution and reengineering.

13. a) Explain component-based software engineering.

(OR)

b) Write about Agile software development and scrum methodologies.

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**4003CSC23-A**  
**B.Sc. (HONOURS) (CBCS) DEGREE EXAMINATIONS, APRIL/MAY - 2025**  
**(Examination at the end of Fourth Semester)**  
**PART - II : COMPUTER SCIENCE**  
**Database Management Systems**  
**(Regulation 2023-24)**

Time : 3 Hours

Maximum Marks : 70

**SECTION - A**

Write short answers for any Five of the following questions. Each question carries 4 marks. (5×4=20)

1. Explain Advantages of DBMS.
2. Explain components of database management system.
3. Write advantages of ER modelling.
4. Explain about union and aggregation in EERM.
5. Explain Relational data model.
6. Explain Normalization and INF.
7. Explain selection Operation with example.
8. Explain Data types in PL/SQL.

**SECTION - B**

Write answers for the following questions. Each question carries 10 marks. (5×10=50)

9. a) Explain classification of DBMS.  

(OR)

b) Explain three schema architecture of database.
10. a) Explain Building blocks of an ERM.  

(OR)

b) Explain constraints on specialization and generalization.

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11. a) Explain CODD rules.

b) Explain relational algebra operations. (OR)

12. a) Explain DDL commands in SQL.

b) Explain sub queries in SQL. (OR)

13. a) Explain PL/SQL language elements.

b) Explain about Database triggers and Types of Triggers. (OR)

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2007OAT23

B.Com. (HONOURS) (CBCS) DEGREE EXAMINATIONS, APRIL/MAY - 2025

(Examination at the end of Second Semester)

Part-II : Computer Applications  
OFFICE AUTOMATION TOOLS  
(Regulation 2023-24)

Time : 3 Hours

Maximum Marks : 70

SECTION - A

Answer any Five of the following questions.

(5×4=20)

1. Auto correct
2. Drop caps
3. Online pictures
4. Cell address
5. Data sort
6. Goal Seek
7. Relative cell reference
8. Deleting Slides

SECTION - B

Answer All the questions.

(5×10=50)

1. a) Explain the features of MS word?  
(OR)  
b) Explain about page formatting.
2. a) Describe about mail merge  
(OR)  
b) How to Insert pictures in MS word Advanced features?

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3. a) How to Create work book in MS Excel? and how to add and delete rows and columns in work sheet?  
(OR)  
b) Explain Mathematical functions in MS Excel?
4. a) Demonstrate the steps in what if analysis?  
(OR)  
b) Describe about view menu.
5. a) What are the features of Power point?  
(OR)  
b) Explain the steps in slide sorter view?
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2003CSC23-B

**B.Sc. (HONOURS) (CBCS) Degree Examinations, April/May - 2025**  
(Examination at the end of Second Semester)

**Part - II : Computer Science**

**Digital Logic Design**

*(Regulation 2023-24)*

**Time : 3 Hours**

**Maximum Marks : 70**

**SECTION - A**

**Answer any Five questions. All questions carry equal marks.**

**(5×4=20)**

1. Write about Decimal number system?
2. Explain about gray code technique?
3. What are conical and standard forms?
4. Write about Boolean laws?
5. Explain the operation of Half-adder?
6. Explain the operation of ripple adder/subtractor.
7. Explain about Multiplexer?
8. What is the difference between combinational and sequential circuit?

**SECTION - B**

**Answer All the questions.**

**(5×10=50)**

9. a) Write about  $r$ 's and  $(r-1)$ 's complements?

**(OR)**

- b) Explain about Excess - 3 d codes?

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10. a) Explain the operation of logic gates using their truth tables?

(OR)

b) Explain the minimization of logic functions using Boolean theorems?

11. a) Explain the operation of Half-subtractor and Full-subtractor?

(OR)

b) Explain briefly about combinational circuits.

12. a) Explain about Decoders and Encoders?

(OR)

b) Explain about demultiplexers?

13. a) Explain about shift registers?

(OR)

b) Explain about synchronous counters?

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