

2023-2024

GEN

[Total No. of Pages :2

4-3-101-R23

**FOUR YEAR B.C.A. (HONOURS) (DATA SCIENCE/ARTIFICIAL
INTELLIGENCE/BIG DATA/CLOUD COMPUTING/GENERAL)
DEGREE EXAMINATION, DECEMBER - 2024**

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER

PART - II

Paper-5: Data Base Management System

(Under CBCS New Regulation w.e.f. the Academic Year 2024-25)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the following questions. Each question carries equal marks.

(5×3=15)

1. Discuss limitations of File Based Systems.
2. Write a short note on Database Schema.
3. Write a short note on Primary key with examples.
4. Give a simple understanding about Functional Dependency.
5. Write a short note on Specialization.
6. Illustrate aggregation with real examples.
7. Explain Integrity constraint with examples.
8. Give a short note on DCL Commands.
9. Give the syntax of PLSQL procedure.
10. Give a short note on Triggers.

4-3-101-R23

(1)

[P.T.O.]

SECTION - B

Answer any Five of the following questions. Each question carries equal marks.

(5×12=60)

- ~~11.~~ Explain 3Tier Database Architecture.
 - ~~12.~~ Discuss the roles of various Database Users.
 - 13. Illustrate and explain Relational Model.
 - ~~14.~~ Compare and contrast 3NF with BCNF.
 - ~~15.~~ Illustrate and explain ER Model.
 - ~~16.~~ Enumerate and explain DDL commands in detail.
 - 17. Enumerate and explain SQL built-in functions with examples.
 - ~~18.~~ Describe relational set operators with examples.
 - 19. Explain PLSQL program structure.
 - 20. Explain a PLSQL cursor with an example.
-

**FOUR YEAR B.C.A. (HONOURS) (DATA SCIENCE/ARTIFICIAL
INTELLIGENCE/BIG DATA/CLOUD COMPUTING/GENERAL)
DEGREE EXAMINATION, DECEMBER - 2024**

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER-MAJOR

PART - II

PAPER-7 : JAVA AND DATA STRUCTURES

(Under CBCS New Regulation w.e.f. the Academic Year 2024-25)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the Following questions. Each question carries equal marks.

(5×3=15)

1. What are the benefits of OOPs.
2. Discuss Java Tokens.
3. Define Object with real examples.
4. Give a short note on this keyword.
5. Compare and contrast error vs exception.
6. Write a short note on Finally statement.
7. What are the benefits of using Data Structures?
8. List five (5) sorting algorithms.
9. Give a short note on Binary Search Trees.
10. List significant applications of Graphs.

SECTION - B

Answer any Five of the following questions. Each question carries equal marks.

(5×12=60)

11. Explain Object oriented concepts with examples and illustrations.

12. Describe Java Datatypes in detail.

13. Explain method Overloading with coding examples.

14. Explain the process of Implementing an Interface.

15. Describe the process of creating and implementing a package.

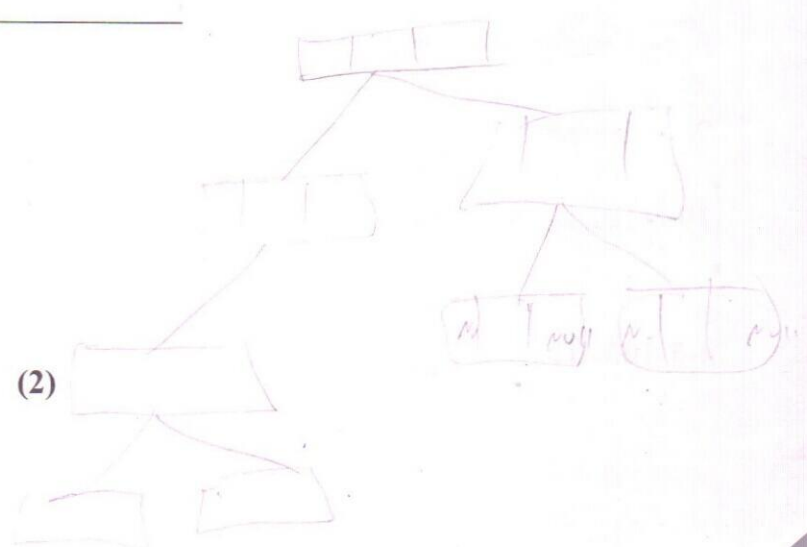
16. Explain Java Applet with coding examples

17. Explain Quick Sort with example.

18. Illustrate and explain linked list with their operations.

19. Explain and illustrate tree traversal methods.

20. Describe the process of traversing a Graph.



**FOUR YEAR (HONOURS) B.C.A. (DATA SCIENCE / ARTIFICIAL
INTELLIGENCE / BIG DATA / CLOUD COMPUTING / GENERAL)
DEGREE EXAMINATION, DECEMBER - 2024**

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER - MAJOR

PART : II

PAPER - 6 : MATHEMATICAL AND STATISTICAL FOUNDATION

(Under CBCS New Regulation w.e.f. the academic year 2024-25)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the following questions. Each question carries equal marks.

(5×3=15)

1. Define Transpose of matrix. Give one example.

2. If $A = \begin{bmatrix} 0 & 2 & 0 \\ 1 & 0 & 3 \\ 1 & 1 & 2 \end{bmatrix}$ $B = \begin{bmatrix} 1 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 3 \end{bmatrix}$ find $2A + 3B$.

3. Define Rank of matrix?

4. Find the determinant of the matrix $\begin{bmatrix} 1 & -1 & 2 \\ 3 & 0 & 4 \\ -4 & -2 & 5 \end{bmatrix}$

5. If set $A = \{2, 4, 6, 8, 10, 12\}$, $B = \{2, 6, 8, 12, 15, 18\}$ then find a) $A - B$ b) $A + B$.

6. In a class of 100 students, 50 play hockey, 34 play basketball, and 14 play both. How many students do not play either of the games?

7. What is meant by classification?

8. What are grouped data and ungrouped frequency distributions?

(16) $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$; $A = \{2, 4, 6\}$; $B = \{4, 5, 6\}$

$(A \cap B)' = A' \cap B'$; $A \cap B = \{4, 6\}$

$(A \cup B)' = U - (A \cup B) = \{1, 3, 5, 7, 8, 9\}$

$A \cap (U - B) = A - B = \{2\}$

$B - U - B = \{2, 3, 4, 5, 6, 7\}$

$A \cap A' = \{2, 4, 6\} \cap \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$\therefore (A \cap B)' = U - (A \cap B) = \{1, 3, 5, 7, 8, 9\} = A \cap B'$

(17) No. of Students in Commerce & Arts = 200

No. of Students in Arts only = 100

No. of Students

$n(A \cap B) =$

$n(A \cup B) = n(A) + n(B) - n(A \cap B)$

$n(A \cap B) = n(A) + n(B) - n(A \cup B)$

$100 =$

No. of Students

= No. of Students

Midpoint

$d_i = \frac{x_i - a}{h} \rightarrow C.I.$

(20) Mean = $\frac{\sum f_i x_i}{N}$ (or) $a + \frac{\sum f_i d_i}{N} \times h$

Median = $a + \frac{\frac{N}{2} - C.F}{F} \times h$

**FOUR YEAR B.A./B.Com/B.Sc./B.C.A/B.B.A/B.Music/B.Dance/B.A(O.L)/
B.H.M/B.VOCATIONAL IN DAIRYING AND ANIMAL
HUSBANDRY/B.VOCATIONAL IN HORTICULTURE**

(ALL GROUPS) DEGREE EXAMINATION, DECEMBER-2024

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER

PART - I(D) : MULTIDISCIPLINARY COURSE

PAPER-IV: HEALTH AND HYGIENE

(Under CBCS New Regulation w.e.f. the academic year 2024-25)

Time : 1½ Hours

Max. Marks : 50

Answer any Five questions. Each question carries equal marks.

(5×10=50)

1. What is nutrition, and why is it important? Explain the difference between good nutrition and malnutrition.
2. Describe what a balanced diet is and outline the basics of planning a meal.
3. Define carbohydrate. Explain its functions and enlist sources of carbohydrates.
4. Define hygiene and explain the different types; personal, community, medical and culinary hygiene.
5. What is the WASH program? Describe its significance in promoting health.
6. Explain the roles of following nutrition and health organizations in India:
a) NIN and b) ICMR.
7. Discuss the importance of environmental sanitation and sanitation in public places for community and personal hygiene.
8. Discuss the National Health Policy of India 2017 and its key health indicators.
9. Describe the principles and strategies of health education. Why is it important?
10. How does the Indian government manage disasters, epidemics, and pandemics? What are the acts, guidelines, and the roles of government and public in these situations?

[Total No. of Pages : 1

3-07(3)-R23

**FOUR YEAR B.A./B.Com/B.Sc./B.C.A/B.B.A/B.Music/B.Dance/B.A(O.L)/
B.H.M/B.VOCATIONAL IN DAIRYING AND ANIMAL
HUSBANDRY/B.VOCATIONAL IN HORTICULTURE**

(ALL GROUPS) DEGREE EXAMINATION, DECEMBER - 2024

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER

PART- I(C) : LIFE SKILL COURSE

PAPER-III: Information and Communication Technology

(Under CBCS New Regulation w.e.f. the academic year 2024-25)

Max. Marks : 50

Time : 1½ Hours

Answer any Five questions. Each question carries equal marks.

(5×10=50)

1. Compare and contrast different types of web browsers.
2. Explain the concept of URL and its components.
3. Define the Internet and explain its significance in modern communication.
4. What is email? Discuss its advantages and disadvantages.
5. Provide an overview of G-Suite tools such as Google Docs, Sheets.
6. Discuss the various threats to Email security.
7. What is a firewall, and how does it function to protect networks?
8. Explain the concept of Digital Signature.
9. What are the types of cryptographic techniques? Explain.
10. Discuss the process of composing an Email.

3-07(3)-R23

FOUR YEAR B.Com./B.B.A. (HONOURS) (General)

DEGREE EXAMINATION, DECEMBER - 2024

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER

PART - II : BUSINESS MANAGEMENT

PAPER - 7 : BUSINESS LAWS

(Under CBCS New Regulation w.e.f. the Academic Year 2024-25)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the following questions. Each question carries equal marks.

(5×3=15)

1. What is void contract?
2. What is voidable contract?
3. Explain consideration.
4. What is acceptance?
5. Write about minor contracts.
6. What is breach of contract?
7. Write a note on warranties.
8. Who is an unpaid vendor?
9. Explain cyber crimes.
10. Explain Digital signature.

SECTION - B

Answer any Five of the following questions. Each question carries equal marks.

(5×12=60)

11. What is a valid contract? Explain the essential elements of a valid contract?
 12. "All contracts are agreements, but all agreements are not contracts"- Discuss.
 13. Explain the different essential elements of a valid offer.
 14. What is consideration? Explain different features of consideration.
 15. Explain different modes of discharge of contracts.
 16. Explain the rules relating to contingent contracts.
 17. Explain the differences between sale and agreement to sale.
 18. Briefly explain about the consumer rights and responsibilities under the consumer protection Act.
 19. What is cyber-crime? Explain various cyber-crimes, relating to Online Banking?
 20. Briefly describe the primary objectives of cyber laws.
-

**FOUR YEAR B.C.A (HONOURS) (GENERAL) DEGREE EXAMINATION,
DECEMBER - 2024**

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER - MAJOR

PART - II

PAPER-8: SOFTWARE ENGINEERING

(Under CBCS New Regulation w.e.f. the academic year 2024-25)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the following questions. Each question carries equal marks.

(5×3=15)

1. Write a short note on Quality Factors with examples.
2. Write a brief note on Planning.
3. Give a brief understanding about Software Cost.
4. Write a short note on Requirements Specification.
5. Explain modularity in brief. ✓
6. Give a short note on Walkthrough with examples.
7. Discuss the need of User Interface. ✓
8. List the characteristics of good user interface. ✓
9. Explain reliability in brief with example.
10. Give a short note on Reengineering. ✓

SECTION - B

Answer any Five of the following questions. Each question carries equal marks.

(5×12=60)

11. Write a Detailed note on Software Size and its factors.
 12. Describe the process of defining the problem with examples.
 13. Explain various software cost estimation techniques.
 14. Enumerate and explain formal specification techniques with neat illustrations and examples.
 15. Write a detailed note on modularization criteria.
 16. Explain the process of preparing test plans with examples.
 17. Write a note on user interface design with illustrations.
 18. List and explain interface standards.
 19. Write a detailed note on Software Quality Assurance.
 20. List and explain programming tools.
-

**FOUR YEAR B.C.A. (HONOURS) (DATA SCIENCE/ARTIFICIAL
INTELLIGENCE/BIG DATA/CLOUD COMPUTING/GENERAL)
DEGREE EXAMINATION, DECEMBER - 2024**

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER-MAJOR

PART - II

PAPER-7 : JAVA AND DATA STRUCTURES

(Under CBCS New Regulation w.e.f. the Academic Year 2024-25)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the Following questions. Each question carries equal marks.

(5×3=15)

- 1. What are the benefits of OOPs.
- 2. Discuss Java Tokens.
- 3. Define Object with real examples.
- 4. Give a short note on this keyword.
5. Compare and contrast error vs exception.
6. Write a short note on Finally statement.
7. What are the benefits of using Data Structures?
8. List five (5) sorting algorithms.
- 9. Give a short note on Binary Search Trees.
- 10. List significant applications of Graphs.

SECTION - B

Answer any Five of the following questions. Each question carries equal marks.

(5×12=60)

• 11. Explain Object oriented concepts with examples and illustrations.

• 12. Describe Java Datatypes in detail.

• 13. Explain method Overloading with coding examples.

• 14. Explain the process of Implementing an Interface.

• 15. Describe the process of creating and implementing a package.

16. Explain Java Applet with coding examples

17. Explain Quick Sort with example.

• 18. Illustrate and explain linked list with their operations.

• 19. Explain and illustrate tree traversal methods.

• 20. Describe the process of traversing a Graph.

