Code No. E-12010/CBCS

FACULTY OF INFORMATICS

M.C.A. (3 Years Course) II-Semester (CBCS) (Backlog) (New) Examination, October/November 2023

Subject: Database Management Systems

Time: 3 Hours **Max. Marks: 70**

Note: I. Answer one question from each unit. All questions carry equal marks.
II. Missing data, if any, may be suitably assumed.

Unit - I

1. a) What is DBMS? Write an account on applications of Database Systems.
   b) Illustrate Database Design process.

(OR)

2. a) Elucidate Entity Relationship Model.
   b) Design the Database for Banking Enterprise.

Unit - II

3. a) Explain about the structure of Relational Databases.
   b) Write a short note on Relational Algebra.

(OR)

4. a) Discuss about Data Definition Languages Commands.
   b) Explain about Aggregate Functions in SQL with Example.

Unit - III

5. a) Describe Integrity Constraints with example.
   b) Write an account on Functions and Procedures in SQL.

(OR)

6. a) Describe the features of Good relational design.
   b) Define Functional Dependency. Write a note on Data decomposition using Functional Dependencies.

Unit - IV

7. a) Write a note on Ordered Indices with Example.
   b) What is B+ Tree? Illustrate Insertion and deletion operations on B+ Trees?

8. a) Write an account on Dynamic Hashing with suitable example.
   b) What is Transaction? Explain about Transaction Properties.

Unit - V

9. a) Discuss about Lock Based Concurrency Control Protocols.
   b) Write a note on Multi Version Schemas.

10. a) Explain about Storage Structure in detail.
    b) Illustrate Remote Backup Systems.

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Code No. E-12063/CBCS

FACULTY OF INFORMATICS

M.C.A. (3 Years Course) II Semester (CBCS) (Backlog) (Old) Examination,
October/ November 2023

Subject: Communication Skills

Time: 3 Hours **Max. Marks: 70**

Note: I. Answer one question from each unit. All questions carry equal marks.
II. Missing data, if any, may be suitably assumed.

Unit – I

1. a) What is the importance of business communication?
   b) Describe the different channels of communication.

(OR)

2. a) Explain the ABC of technical communication.
   b) What are organizational GDs?

Unit – II

3. a) Explain Johari Window and Knapp's model.
   b) Explain the features of telephone etiquette and e-mail etiquette.

(OR)

4. a) Briefly explain the models of interpersonal development.
   b) Elaborate on the persuasion techniques of communication.

Unit – III

5. a) Explain the difference between technical writing and general writing.
   b) Explain the difference between technical reports and scientific reports.

(OR)

6. a) Write a report on the annual day celebrations in your college.
   b) Explain the structure and format of technical reports.

Unit – IV

7. a) What is the importance of an SOP?
   b) Apply to a University abroad with your SOP.

(OR)

8. a) Explain the agenda and minutes of a meeting.
   b) Prepare the agenda and minutes of your meeting with the college principal regarding a proposal for study hours after college hours.

Unit – V

9. a) Define group discussions. What are the various types of group discussions?
   b) Explain the features of a good GD.

(OR)

10. a) Explain interview skills.
    b) Prepare an interview questionnaire and answers with a notable sports personality.

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Code No: E-12182/CBCS

FACULTY OF INFORMATICS

M.C.A. (2 years Course) II-Semester (CBCS) (Main & Backlog) Examination,
October / November 2023

Subject: Machine Learning

Time: 3 Hours **Max. Marks: 70**

Note: I. Answer one question from each unit. All questions carry equal marks.
II. Missing data, if any, may be suitably assumed.

Unit - I

1. a) Write notes on Bernoulli distribution.
   b) Give an overview of Eigen vector.

(OR)

2. a) Formally define statistical decision theory.
   b) Explain about the conjugate priors.

Unit – II

3. a) Give an overview of Bayesian linear regression.
   b) Write notes on lasso.

(OR)

4. a) Calculate the covariance in PCA method.
   b) Describe the equation of partial least square regression.

Unit – III

5. a) Discuss the functionality of logistic regression.
   b) Explain the working of ANN.

(OR)

6. a) Write the description of kernel SVM.
   b) Elaborate the naïve Bayes algorithm.

Unit – IV

7. a) Explain the ada boost method.
   b) What is bagging method? Explain it.

(OR)

8. a) Explain the working of k-medoid.
   b) Write notes on clustering methods.

Unit – V

9. a) Explain the steps of E&M.
   b) Differentiate between GMM and other clustering algorithms.

(OR)

10. a) Discuss the reinforcement learning and explain its application.
    b) Describe the structure of a Bayesian network.

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