

Exam. Seat No.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
FYBBA (CA)
Semester-I
BBACA-102-GEN: Database Management System
(2024 Pattern)

Time: 02.00 Hours

(No.of.Credit:04)

Max. Marks: 60

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Draw neat diagrams wherever necessary.

Q.1 (A) Attempt each of the following

(1 Marks each)

- i) What is database?
- ii) List the commands in DML
- iii) Define Super Key.
- iv) What is an entity in DBMS?

(B) Attempt each of the following

(2 Marks each)

- i) What is a foreign key? Give an example.
- ii) Explain data independence in a DBMS.
- iii) Explain the different types of users in a DBMS
- iv) Write syntax for INSERT statement and UPDATE statement.

Q.2 Write short notes on any three of the following.

(4 Marks each)

- i) Structure of DBMS
- ii) Object-Based Logical Model
- iii) Normalization
- iv) Nested Queries in SQL

Q.3 Attempt any two of the following.

(6 Marks each)

- i) What is an Attribute? Explain its types
- ii) What is abstraction? Explain levels of abstraction.
- iii) Explain various elements of ERD.

Q.4 Attempt any two of the following.

(6 Marks each)

- i) State and explain aggregate functions in SQL (any three with examples).
- ii) Explain Advantages and Disadvantages of DBMS.
- iii) What are the anomalies in an unnormalized database?

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

- i) a) Consider the following Entities and Relationships & solve the queries:

Department (dept_no, dept_name, location)

Employee (emp_no, emp_name, address, salary, designation)

Relation between Department and Employee is One to Many.

- Find the name of department whose salary is above 10000.
- Display list of employees having designation 'CLERK'.
- Display the name of employee who are working in 'HR department'.

- b) Explain DML command with examples.

- ii) a) Explain the various relational operations used in relational algebra.

- b) Draw ERD for Hospital Management System

- Identify all entities
- Identify all relations.
- Draw E-R Diagram.

Total No. of Questions: 3

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune

Class: FYBBA(C.A.)
(Semester -I)
BBACA-107-AEC: Business Communication-I
(2024 Pattern)

Time: 01.00 Hours

(No. of Credits 02)

Max. Marks: 30

Instructions to the candidates : (If any)

- i. All questions are compulsory.
 - ii. Figure to right indicate full marks.
 - iii. Draw the diagram whenever necessary.
-

Q1. A. Attempt the following

- i) Define Active Listening.
- ii) What is informal Communication.
- iii) Explain any two advantages and disadvantages of Written Communication.
- iv) What is the role of visual communication in presentations?

1 mark each**B. Attempt the following****2 mark each**

- i) What is Oral and Written communication.
- ii) Give two examples of effective communication practices on social media platforms.
- iii) What is report? List any four types of Report.

Q2. Attempt any four of the following.**3 mark each**

- i) Explain formal letter with example.
- ii) What are the essential etiquettes for professional email communication?
- iii) Differentiate between verbal and non-verbal communication.
- iv) What are the responsibilities of a good digital citizen?
- v) What is minutes? Give the contents of Minutes.
- vi) Differentiate between Personal Website and Organizational Website.

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

- i) a) Consider the following Entities and Relationships & solve the queries:

Department (dept_no, dept_name, location)

Employee (emp_no, emp_name, address, salary, designation)

Relation between Department and Employee is One to Many.

- Find the name of department whose salary is above 10000.
- Display list of employees having designation 'CLERK'.
- Display the name of employee who are working in 'HR department'.

- b) Explain DML command with examples.

- ii) a) Explain the various relational operations used in relational algebra.

- b) Draw ERD for Hospital Management System

- i. Identify all entities
- ii. Identify all relations.
- iii. Draw E-R Diagram.

Total No. of Questions: 3

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Affiliated to Savitribai Phule Pune University, Pune

Class: FYBBA(C.A.)
(Semester -I)
BBACA-107-AEC: Business Communication-I
(2024 Pattern)

Time: 01.00 Hours

(No. of Credits 02)

Max. Marks: 30

Instructions to the candidates : (If any)

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw the diagram whenever necessary.

Q1. A. Attempt the following

- i) Define Active Listening.
- ii) What is informal Communication.
- iii) Explain any two advantages and disadvantages of Written Communication.
- iv) What is the role of visual communication in presentations?

1 mark each**B. Attempt the following****2 mark each**

- i) What is Oral and Written communication.
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- iii) What is report? List any four types of Report.

Q2. Attempt any four of the following.**3 mark each**

- i) Explain formal letter with example.
- ii) What are the essential etiquettes for professional email communication?
- iii) Differentiate between verbal and non-verbal communication.
- iv) What are the responsibilities of a good digital citizen?
- v) What is minutes? Give the contents of Minutes.
- vi) Differentiate between Personal Website and Organizational Website.

Q3. Attempt any two of the following.

4 mark each

- i) What are the best practices for creating a successful website?
- ii) Write a formal for job application at your dream company.
- iii) Prepare the report for feasibility of implementing eco-friendly practices in your organization.
- iv) What tools support digital collaboration, and how do they enhance productivity?

Total No. of questions: 05]

[Total No. of Pages: 02

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: F.Y.BBA (C. A.)
(Semester-II)
BBACA-151-GEN: Data Structure using C
(Fresh 2024 Pattern)

Time: 2:00 Hours]

No of Credit:04

[Max.Marks:60

Instruction:

- i. All questions are compulsory
- ii. Figure to right indicate full marks

Q1. A. Attempt each of the following

1 mark each

- i. Define Stack.
- ii. What is an ADT?
- iii. What linear search.
- iv. Define Degree of Graph.

B. Attempt each of the following

2 mark each

- i. What are the Applications of Stack?
- ii. What is Queue? How it is represented in memory?
- iii. What is Doubly Linked List?
- iv. What is Time complexity and Space complexity?

Q2. Attempt any Three of the following

4 mark each

- i. Write an algorithm for binary search
- ii. Explain the insertion sort algorithm with example
- iii. What is Circular Linked list? Explain in detail
- iv. What is dynamic memory allocation? Explain in detail

Q3. Attempt any Two of the following

6 mark each

- i. Write a function to delete the last node from singly circular linked list
- ii. Sort the following data using Quick sort
22,33,11,40,77,90,44,60,99,55,88
- iii. What is the difference between stack and queue?

Q4. Attempt any Two of the following

6 mark each

- i. What is BFS and DFS explain in detail.
- ii. Write a C program to implement a stack using a linked list.
- iii. Sort the following data using Merge Sort
6,5,12,10,9,1

Q5. Attempt any One of the following

12 mark each

- i.
 - a) Sort following data using selection sort
64, 25, 12, 22, 11,56
 - b) Explain the types of Queue in detail
- ii. What is a binary tree? Explain tree traversals methods in detail.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune

Class: FYBBA-CA
Semester-II

Paper Code: BBACA-152-GEN Relational Database Management System
(2024 Pattern)

(No.of.Credit:04)

Max. Marks: 60**Time : 02.00 Hours****Instructions to the candidates: (If any)**

- (i) All questions are compulsory.
- (ii) Figures to the right indicate full marks.
- (iii) Neat diagrams must be drawn wherever necessary.
- (iv) Assume suitable data, if necessary

Q.1 (A) Attempt each of the following**(1 Marks each)**

- (i) Define a cursor in PL/SQL.
- (ii) What is a recoverable schedule?
- (iii) Name any two popular RDBMS software.
- (iv) What is the purpose of the %TYPE attribute in PL/SQL?

(B) Attempt each of the following**(2 Marks each)**

- (i) Differentiate between DBMS and RDBMS with two points.
- (ii) Explain the ACID properties of transactions.
- (iii) What are predefined and user-defined exceptions in PL/SQL?
- (iv) List two differences between procedures and functions.

Q.2 Write short notes on any three of the following.**(4 Marks each)**

- (i) Two-Phase Locking Protocol (2PL)
- (ii) Types of Cursors in PL/SQL (Implicit, Explicit, Parameterized)
- (iii) Conflict Serializability
- (iv) Log-Based Recovery in Transaction Management

Q.3 Attempt any two of the following.**(6 Marks each)**

- (i) Explain timestamp-based concurrency control with Thomas Write Rule.
- (ii) Describe deadlock prevention, detection, and recovery strategies.
- (iii) Explain PL/SQL block structure with an example.

Q.4 Attempt any two of the following.

(6 Marks each)

- (i) Compare immediate and deferred database modification techniques.
- (ii) Discuss exception handling in PL/SQL with examples.
- (iii) Explain view serializability rules with proper examples.

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

- (i) Discuss concurrency control protocols (Lock-Based, Timestamp-Based, Validation-Based) with advantages and limitations.
- (ii) Explain the following in PL/SQL with examples:
 - Procedures vs. Functions
 - Cursor Attributes (%FOUND, %NOTFOUND, %ROWCOUNT)
 - Exception Handling (Predefined and User-Defined)

Total No. of Questions: 3

Total No. of Pages: 2

**Anekant Education Society's
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Affiliated to Savitribai Phule Pune University, Pune

Class: FYBBA(C.A.)

(Semester -II)

BBACA-157-AEC: Business Communication-II

(2024 Pattern)

Time: 01.00 Hours**(No. of Credits 02)****Max. Marks: 30****Instructions to the candidates:**

- i. All questions are compulsory.*
- ii. Figure to right indicate full marks.*
- iii. Draw the diagram whenever necessary.*

Q1. A. Attempt the following

- i) What is Press Conference?
- ii) Define Seminar.
- iii) What is Active listening?
- iv) What is group communication?

1 mark each**B. Attempt the following**

- i) Enlist Key elements of effective Presentation.
- ii) Compare enquiry and order letter.
- iii) Enlist different types of Business Letter Layouts.

2 mark each**Q2. Attempt any four of the following.****3 mark each**

- i) Explain the different essential Qualities of a Business Letter.
- ii) Write a complaint letter regarding late delivery and damage of documents.
- iii) What are the key elements of an effective group discussion? Give an example.
- iv) Describe four types of business etiquette with examples.
- v) Discuss the effective use of PowerPoint and Google Slides in business presentations.
- vi) Explain Characteristics of Good Speech.

Q3. Attempt any two of the following.

4 mark each

- i) Write a Job Application Letter for the post of Marketing Executive.
- ii) Differentiate formal and informal discussions with suitable examples.
- iii) Draw Structure of a Business Letter Layout and explain its elements.
- iv) Draft a report by a committee on the feasibility of introducing a new product.

Total No. of Questions: 3

Total No. of Pages: 1

Anekant Education Society's
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(Autonomous)

Affiliated to Savitribai Phule Pune University, Pune

F.Y.BBA (C.A.)

Semester: I

BCA-121-VSC: Networking

NEP 2023 Pattern

(No.of.Credit:02)

Time: 01.00 Hour

Max. Marks: 30

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Neat diagrams must be drawn wherever required.

Q1. (A) Attempt each of the following**(1 Marks each)**

- i. Define HTTP
- ii. What is IP address?
- iii. What is Ethernet?
- iv. What is switching?

(B) Attempt each of the following**(2 Marks each)**

- i. What is Intranet & Extrane?
- ii. Define Firewall. List types of Firewall.
- iii. What is Router? List its components.

Q.2 Attempt any Four of the following.**(3 Marks each)**

- i. What is attack? Explain various types of attacks.
- ii. What is Computer Network? Explain Goals of computer Network.
- iii. Compare connection oriented and connectionless services.
- iv. Explain any two types of switching in details.
- v. Explain types of topologies.
- vi. Explain IPV4 packet format

Q.3 Attempt any Two of the following.**(4 Marks each)**

- i. Differentiate between TCP and UDP.
- ii. A 7 bit Hamming code is received as 1011011. Assume Even parity and state whether received code is correct or wrong? If code is wrong, locate the bit in error.
- iii. What is addressing? Explain different types of addresses.
- iv. Explain ISO-OSI reference model with diagram.

Total No. of Questions: 3]

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Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: F.Y.BBA (C. A.)
(Semester-II)
BCA-151-MJM: Data Structure using C
Backlog (NEP 2023 Pattern)

Time: 01.00 Hours

(No. of Credits 02)

Max. Marks: 30

Instructions to the candidates:

- i. *All questions are compulsory.*
- ii. *Figure to right indicate full marks.*

Q1. (A) Attempt each of the following**(1 Marks each)**

- (i). What is Pointer?
- (ii). Define recursion.
- (iii). Define Queue.
- (iv). What is a binary tree?

(B) Attempt each of the following**(2 Marks each)**

- (i). What is a priority queue?
- (ii). What linear search.
- (iii). What is Doubly Linked List?

Q2. Attempt any four of the following**(3 Marks each)**

- (i). What is the difference between stack and queue?
- (ii). What is Circular Linked list? Explain in detail
- (iii). Explain the working of the binary search algorithm with an example.
- (iv). Sort the data using insertion sort
23,15,29,11,01,07
- (v) Explain the selection sort algorithm with example
- (vi) Write a function to insert a node at start in singly linked list

Q3. Attempt any two of the following

(4 Marks each)

- (i). Write a C program to implement a stack using a linked list.
- (ii). Explain Bubble Sort with example.
- (iii). What are the different tree traversing methods? Explain.
- (iv). Sort following data using Merge sort

64, 25, 12, 22, 11, 56

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Total No. of questions: 05]**[Total No. of Pages: 02****Anekant Education Society's****Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati****(Empowered Autonomous)****Affiliated to Savitribai Phule Pune University, Pune.****F.Y. BBA (C.A.)****BCA1201: Object Oriented Programming using C++****Semester-II****Backlog (2019 pattern)****Time: 2:00 Hours]****No of Credit:3****[Max.Marks:60****Instruction:**

- i. All questions are compulsory
- ii. Figure to right indicate full marks

Q1. A. Attempt each of the following**1 mark each**

- i What is a destructor?
- ii Define class.
- iii Define abstraction
- iv What does the private access specifier do in C++?

B. Attempt each of the following**2 mark each**

- i What is the use of the this pointer in C++?
- ii What is meant by static data members?
- iii What is Dynamic Binding?
- iv What is function overloading?

Q2. Write short note on any Three of the following**4 mark each**

- i Default Constructor.
- ii Call by Value and Call by Reference.
- iii Pure Virtual Functions
- iv Features of Object Oriented language

Q3. Attempt any Two of the following

6 mark each

- i Write a program in C++ to find whether a entered number is even or odd.
- ii Explain use of friend function with the help of suitable example
- iii Explain function templates and class templates with an example.

Q4. Attempt any Two of the following

6 mark each

- i Explain hybrid inheritance with an example.
- ii List all ios format functions used in C++. Explain the use of any two ios format function with the help of suitable example.
- iii Write a C++ Program to Check Whether a character is Vowel or Consonant

Q5. Attempt any One of the following

12 mark each

- i What is exception? Explain with example how exception is handled in C++?
- ii
 - a. Write C++ program to calculate area of rectangle.
 - b. Explain the concept of operator overloading with an example.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune

Class : FYBBA(CA)
BCACA1202 : Database Management System
Semester : II
(Backlog) (2019 Pattern)
(No.of.Credit:03)

Time : 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

- (i) All questions are compulsory.
- (ii) Figures to the right indicate full marks.
- (iii) Neat diagrams must be drawn wherever necessary.
- (iv) Assume suitable data, if necessary

Q.1 (A) Attempt each of the following**(1 Marks each)**

- i) Name one advantage of DBMS.
- ii) Define a Primary Key.
- iii) What is a Deadlock in DBMS?
- iv) What is a system crash in DBMS?

(B) Attempt each of the following**(2 Marks each)**

- i) Differentiate between Schema and Instance.
- ii) Explain the difference between Tuple and Attribute.
- iii) Differentiate between transaction failure and system crash.
- iv) Explain foreign key give example?

Q.2 Attempt any three of the following.**(4 Marks each)**

- i) Describe different types of database users with their roles.
- ii) Explain role of DBA with respect to security.
- iii) Explain the concept of deadlock detection in DBMS.
- iv) Compare deferred database modification and immediate database modification.

Q.3 Attempt any two of the following.**(6 Marks each)**

- i) Differentiate between the Relational Model and Object-Oriented Data Model.
- ii) Describe different types of relationship degrees in DBMS with examples.
- iii) Explain Serial & Concurrent Schedule with example.

Q.4 Attempt any two of the following.**(6 Marks each)**

- i) Explain the concept of generalization, specialization, and aggregation in ER diagrams.
- ii) Explain in detail following terms with examples
 - a. View Serializability
 - b. Conflict Serializability
- iii) Explain the ACID properties of transactions with examples.

Q.5 Attempt any one of the following (Long answer questions).**(12 Marks each)**

- i) Explain the process of converting a database into 1NF, 2NF, and 3NF with an example.

ii) Consider the following database maintained by a Bank. The Bank maintains information about its branches, customers, and their loan applications. The following are the tables:

[Note: Do not create & insert statement write only Queries, View & Trigger code only]

Branch (Bid Integer, Bname Varchar (30), Brcity Char (10)),

Customer (Cno Integer, Cname Varchar (20), Caddr Varchar (35), City Varchar (20)),

Loan_Application (Lno Integer, L_Amt_Required Numeric (5,2), L_Amt_Approved Numeric (5,2), L_Date Date)

The relationship is as follows:

Branch, Customer, Loan_Application Is Related with Ternary Relationship.
Ternary (Bid Integer, Cno Integer, Lno Integer).

a. Solve the following Queries

1. Count the number of loan applications received by "M.G. ROAD" branch.
2. List the names of the customers who have received loans less than their requirement.

b. Create a view

- i. which contains the details of all customers who have applied for a loan more than Rs. 100000.
- ii. Which Contains details of all loan application from the "Shivajinagar" branch.

c. Write a Function

- i. Write a function that returns the total number of customers of a particular branch (Accept Branch name as input parameter)
- ii. Write a function to find the maximum loan amount approved.

Total No. of Questions: 5

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Affiliated to Savitribai Phule Pune University, Pune

Class: FYBBA(C.A.)

(Semester-II)

BCA1203: Software Engineering

~~(Backlog)~~ (2019 Pattern)

(No.of.Credit:03)

Time: 02.00 Hours

Max. Marks: 60

Instructions to the candidates: (If any)

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw the diagram whenever necessary.

-
- Q.1 (A) Attempt each of the following** (1 Marks each)
- i) List elements of System.
 - ii) Define MIS.
 - iii) What is Class ?
 - iv) Define Abstraction.
- (B) Attempt each of the following** (2 Marks each)
- i) Define System Analyst.
 - ii) What is Encapsulation?
 - iii) Define ERD.
 - iv) Explain in brief System Concept
- Q.2 Attempt any three of the following.** (4 Marks each)
- i) Explain SRS.
 - ii) Explain the interview in details.
 - iii) What is software engineering? Why there is need of Software engineering for system?
 - iv) Explain the steps involved in requirement analysis.
- Q.3 Attempt any two of the following.** (6 Marks each)
- i) Explain Pseudo Code with example.
 - ii) Explain classical SDLC Model.
 - iii) Consider a generalized Student Information system. When a student to take his/her admission his/her personal information is recorded and according to the previously passed exam class is allocated. Layout Input and Output design

Q.4

Attempt any two of the following

(6 Marks each)

- i) What is Cohesion? Explain different types of Cohesion.
- ii) Explain the different feasibilities in details.
- iii) Explain the McCall's Software Quality Factors with suitable diagram.

Q.5

Attempt any one of the following (Long answer questions).

(12 Marks each)

- i) Identify the entities for Hotel Reservation System and write down it and solve the following.
 - a. Draw ERD.
 - b. Draw Context Level DFD.
 - c. Draw First Level DFD.
- ii) A co-operative bank XYZ will grant loans under the following conditions
 - a. If a customer has an account with the bank and also has no loan outstanding, loan will be granted.
 - b. If a customer has an account with the bank but some amount outstanding from previous loan, then loan will be granted if special management approval is obtained.
 - c. Reject loan application in all other cases.

Draw Decision tree and Decision table for the above case study.