

**GOVERNMENT DEGREE COLLEGE
NANDIKOTKUR, KURNOOL-DIST.**

**SUBJECT: PROBLEM SOLVING IN C
QUESTION BANK
I YEAR B.Sc (MPCs)-I SEMESTER**

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MULTIPLE CHOICE QUESTIONS

1. ____ is a picture in which the flows of computational paths are depicted.

- (A) Algorithm
- (B) Program
- (C) Code
- (D) Flow chart

2. Among unary operation which operator represents increment?

- (A) --
- (B) ++
- (C) -
- (D) !

3. The function scanf is used to ____

- (A) To take logical decisions
- (B) Input a set of values
- (C) Print a set of values
- (D) Do mathematical manipulations

4. If the function returns no value then it is called ____

- (A) Data type function
- (B) Calling function
- (C) Main function
- (D) Void function

5. A function ____

- (A) May or may not need input data
- (B) May or may not return a value
- (C) Both a and b
- (D) None of these

6. Which character is used to indicate the end of the string?

- (A) Any alphabet
- (B) A
- (C) Null
- (D) None of these

7. Each element of a structure can be ____

- (A) Read and printed as a separate data item
- (B) Printed as a separate data item
- (C) Read as a separate data item
- (D) None of these

8. In the for loop structure, which statement is present?
(A) Assign statement
(B) Alter statement
(C) Both (a) and (b)
(D) None of these
9. When the computer is waiting for the input?
(A) Files are selected
(B) The cursor is blinking in the VDU screen
(C) Menu will appear on the screen
(D) None of these
10. Which of the following operators has highest precedence?
(A) *
(B) /
(C) %
(D) All have same precedence

FILL IN THE BLANKS

1. All keywords in C are in _____
2. The C-preprocessors are specified with _____ symbol.
3. The standard header _____ is used for variable list arguments (...) in C.
4. scanf() is a predefined function in _____ header file.
5. The global variables are _____.
6. Every C Program should contain _____ function.
7. Arguments passed to a function in C language are called _____ arguments.
8. An Identifier can start with _____
9. C is a _____ language.
10. In the C language, the constant is defined _____.
11. If the function returns no value then it is called _____
12. All keywords in C are in _____
13. Functions in C Language are always _____
14. _____ are tokens in C?
15. _____ the maximum size of a double variable.

UNIT-I

General Fundamentals and Introduction to Algorithms & Programming Languages

1. Define Computer? Explain in detail about computer with neat diagram.
2. Define Computer? Explain different types of computer.
3. Explain about computer generations in detail.
4. Define memory? Discuss about main memories in details.
5. What is cache memory? Explain.
6. Define an algorithm? What are the characteristics of an algorithm? Explain briefly.
7. What is a flowchart? Explain different flowchart symbols.
8. Explain different generations of programming languages.
9. What are uses/applications of computers?
10. What are the differences between RAM and ROM.?

UNIT-II

Introduction to C and Decision Control Looping Statements

1. Write short notes on C-Program structure.
2. Define data type? Explain different types of data types in C language.
3. Define variable and constant? Explain briefly.
4. Define an operator? Explain various operators in c.
5. Discuss about conditional branching statements or decision control statements.
6. Define a loop/iteration? Explain about different iterations in C language.
7. Distinguish between Do. While and while loop.
8. Discuss about break and continue statements.

UNIT-III

Arrays and Strings

1. Define an array? How elements in an array are accessed?
2. Define an array? Explain different ways to store values in an array.
3. Explain about one dimensional array with example.
4. Explain about two dimensional arrays with example.
5. Define string? Explain operations of strings

UNIT-IV

Functions, Structures and Unions

1. Write about functions in C.
2. What is function? Explain its advantages.
3. How arguments are passed to a function. Explain with example.
4. Define variable. Explain the scope of variables.
5. Explain about various storage classes in C.
6. Define a structure. Write short notes on structures.
7. Define an union. Write short notes on union.
8. Define an enumerated data type? Explain.
9. Define recursion. How recursion is implemented in C?

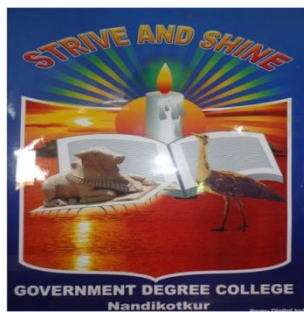
UNIT-V

Pointer and Files

1. Define pointers. Explain the pointers in C.
2. Discuss about pointers and arrays briefly.
3. Discuss about dynamic memory allocation in detail.
4. Define a file? Explain different types of files in C language.
5. Discuss about file operations in c.
6. Explain about different commands used for reading and writing data onto the files.
7. Write about command line arguments in C.

GOVT. DEGREE COLLEGE

NANDIKOTKUR- AP



QUESTION BANK

II YEAR B.Sc(MPCs)

DATABASE MANAGEMENT SYSTEM (DBMS)

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Unit-I

Short questions:

1. What is a database,dbms,metadata? (*)
2. Explain why DB design is important.
3. What are DB systems?
4. Explain different types of databases?
5. What are the advantages of DBMS?(**)
6. What are keys?
7. List out codd's relational DB rules (*)
8. Distinguish between simple and composite attributes
9. Explain DB system environment
10. Explain DB basic building blocks (*)
11. Write about tables and their characteristics
12. What is logical independence? (*)
13. List the limitations of DBMS?(*)

Essay questions:

1. Discuss about historical roots of a database?
2. What are the problems with file system data management?(*)
3. Explain about data redundancy?
4. List and explain the functions and capabilities of DBMS? (*)
5. Describe about data modeling and data models? (*)
6. Explain in detail why database is important?
7. What are business rules?discuss in detail? (**)
8. Explain the evolution of data models? (*)
9. Explain the disadvantages of data models? (*)
10. Explain in brief about the degree of data abstraction? (****)
11. Write about the logical view of data in relational database model.
12. Define a relation?and explain the characteristics of relational table. (*)
13. What is a relationship?discuss about relationships within the relational database.
14. Define the terms data dictionary and system catalog? (**)
15. What is an index?explain? (*)
16. Discuss in detil about integrity rule in relational data model. (**)
17. Explain in detail the components of DB system environment? (*)
18. Explain with example the relational set operators. (**)

Unit-II

Short questions:

1. What is an entity, entity type, entity instance and domain? (**)
2. What is a relationship, relationship type and relationship instance.
3. Define data redundancy?
4. What is denormalization?
5. What is a surrogate key?
6. Define ER model? (*)
7. Define functional dependency?
8. What is an entity? explain different types of entities? (*)
9. What is an attribute? explain different types of attributes? (***)
10. Explain recursive relationship with example? (**)
11. Explain Degree of relationship? (*)

Essay questions:

1. What is entity relationship model ? explain with example?
2. What are the basic constructs of ER model.
3. Discuss about the challenges of DB design conflicting goals.
4. Explain with example how to develop an ER diagram
5. What is normalization? explain about DB tables and normalization(*)
6. Explain 1st, 2nd and 3rd normal forms(**)
7. Explain in detail about higher normal forms.
8. Explain BCNF and 4th normal form with example. (*)
9. Explain how to improve the DB's ability to provide information and to enhance its operational characteristics (Improving Design).
10. What is a Surrogate Key? What are its advantages and disadvantages?
11. What is an EER Model and how to represent Supertype and Subtype relationships? (*)
12. Explain Inheritance and Subtype discriminator with examples. (***)
13. Describe in brief about specialization and generalization. (**)
14. What is entity clustering? Explain the use of entity clusters in ERD. (**)
15. What is a Primary Key? Explain some desirable Primary Key characteristics(guidelines). (*)
16. Explain Learning Flexible DB Design Cases. (*)
17. Explain the usage of composite primary key with an example. (*)
18. Explain with example the disadvantages of storing derived attributes. (*)

Unit -III

Short questions:

1. Explain select query in sql
2. Explain how to create table with syntax in sql
3. What are views and indexes? (*)
4. What is a cursor,stored procedures? (*)
5. What are the several parts of sql
6. Explain various data types used is sql and pl/sql (**)
7. What is the syntax to create sequences in oracle?
8. Explain column constraint in sql (*)
9. What is physical security? (*)
10. Define trigger? (**)

Essay questions:

1. List and explain various DML,DDL commands in sql? (*)
2. List out some important sql functions? (**)
3. Explain arithmetic functions? (*)
4. What is a join?discuss about various joins used in sql? (**)
5. Explain order by,group by and having clauses with example?
6. List and explain sql relational set operators (***)
7. List and explain sql logical operators
8. Explain special operators?
9. Explain in brief about subqueries and correlated queries? (**)
10. Discuss in brief about procedural sql?
11. What is SDLC?explain various steps used in SDLC? (**)
12. What is DBLC?what are the steps involved in DBLC? (**)
13. Discuss in detail about the strategies of DB design
14. Distinguish two different design philosophies in DB design(centralized & decentralized).
15. What is a trigger?explain?
16. Explain various types of cursors?
17. What is exceptional handling with example? (*)

Unit-IV

Short questions:

1. What is concurrency control?
2. Write about distributed transparency
3. What is a transaction? and what is transaction log? (*)
4. What is DDBMS?
5. List the main categories of concurrency control mechanism?
6. Explain the advantages and disadvantages of DDBMS? (*)
7. Explain DDBMS components? (*)
8. What is data fragmentation? (*)
9. Write about transaction ACID rules/transaction properties? (**)
10. Explain different locks? explain binary lock? (**)
11. Explain deadlock? (*)
12. Explain commit and rollback commands?
13. What is scheduler? (*)

Essay questions:

1. What is concurrency control? explain the 3 main problems associated with it? (*)
2. Explain about the concurrency control with locking methods? (*)
3. Describe in detail about time-stamp based concurrency control method? (**)
4. Describe in detail about optimistic cc method?
5. Explain in detail the need for DB recovery management? (*)
6. What is data replication? explain 3 replicated strategies? (*)
7. Explain the difference between distributed processing and distributed DB?
8. Explain the characteristics of DDBMS. (**)
9. Discuss in brief about levels of data and process distribution? (*)
10. Explain the distributed database transparency features?
11. Explain the transaction transparency?
12. Explain in detail two phase commit protocol? (**)
13. Explain performance transparency and query optimization?
14. Explain the difference between distributed DB and client/server architecture
15. Explain how to ensure serializability using two-phase locking? (*)

Unit-V

Short questions:

1. What is the purpose of %rowtype data type? Explain with example.
2. What is a PL/SQL package?
3. What is a trigger?
4. What are the PL/SQL cursors?
5. Write a statement to disable a trigger named update_marks.
6. Which command is used to delete a trigger?
7. Which command is used to delete a procedure?
8. What is the difference between a function and a stored procedure?
9. How do you declare a user-defined exception?
10. What do you understand by explicit cursors?

Essay questions:

1. Explain Select Query in SQL.
2. Explain how to create table with syntax in SQL.
3. What are Views and Indexes?
4. Explain Cursor, Store Procedure.
5. Explain various Data types used in SQL and PL/SQL.
6. What is the syntax to create sequences in Oracle?
7. Explain column constraints in SQL.
8. List and explain various DML, DDL commands in SQL.
9. List out some important SQL functions.
10. Explain Arithmetic functions.
11. What is a Join? Discuss about various joins used in SQL.
12. Explain Order by, Group by and Having Clauses with example.
13. List and explain SQL Relational Set Operators.
14. List and explain SQL Logical Operators.
15. Explain Special Operators.
16. Explain in brief about Sub queries and Correlated queries.
17. Discuss in brief about Procedural SQL.