B. K. BIRLA CENTRE FOR EDUCATION, PUNE

(SENIOR SECONDARY CO-ED DAY CUM RESIDENTIAL SCHOOL, AFFILIATED TO CBSE NEW DELHI)

PRE MID TERM (2024-25)

SUBJECT 5 : ARTIFICIAL INTELLIGENCE (843)

Class : XI Sci/Com/Hum   Duration : 1 hour

Date : 01-08-2024   Max. Marks : 25

MARKING SCHEME

I. Multiple Choice Questions : (Answer any nine)   **(9 X 1 = 9)**

(1) What does an upright (straight) body posture convey or show ?

    (a) Shyness   (b) Fear   **(c) Confidence**   (d) Intelligence

(2) Choose the correct example of oral communication.

    (a) Reports   (b) Newspapers

    (c) Face-to-face interaction   (d) Notes

(3) Which of the following methods is used to receive information from the sender ?

    (a) Listening   (b) Speaking   (c) Telling   (d) Writing

(4) …………………… refers to knowing one's potential by examining and analysing intellectual and spiritual capacities.

    (a) Self management **(b) Self exploration**   (c) Grooming   (d) Intelligence

(5) …………………… refers to the things people do to keep themselves neat and presentable.

    (a) Team norms   (b) Team process   **(c) Grooming**   (d) None of these

(6) …………………. refers to a group of people who have complementary skills and work towards a common goal.

    (a) Group   (b) Company   **(c) Team**   (d) None of these

(7) …………………. data type takes the values in the form of 0 and 1 in the database.

    (a) Integer   (b) Text   **(c) Boolean**   (d) Memo

(8) A relational database uses …………………… commands which is a standard user application that provides an easy programming interface for database interaction.

    (a) Access   (b) Python   **(c) SQL**   (d) Protocol

(9) The DROP command is used to :

    (a) Drop only databases   (b) Drop only tables

    (c) Drop databases or tables   (d) None

(10) Which clause can be used with the SELECT statement in SQL to specify which rows to retrieve from the Table?

    (a) Where   (b) Which   (c) Set   (d) Like

II. Short Answer Type Questions : (Answer any five)   **(5 X 2 = 10)**

(1) Explain the communication cycle briefly.

Ans. :

The communication cycle is a process that describes how information is exchanged between individuals. It involves several key steps:

1. Sender: The person who initiates the communication by creating a message.
2. Encoding: The sender translates thoughts or ideas into a form that can be communicated, such as words, gestures, or symbols.
3. Message: The encoded information that is sent from the sender to the receiver.

4. Channel: The medium through which the message is transmitted, such as spoken words, written text, email, or body language.
5. Receiver: The person who receives the message.
6. Decoding: The receiver interprets or translates the message back into thoughts or ideas.
7. Feedback: The receiver responds to the message, providing feedback to the sender, which indicates whether the message was understood and how it was interpreted.

(2) Write down the different types of communication. Explain any two with examples.

Ans. :

Verbal Communication:
- Definition: Communication through spoken words, either face-to-face or over the phone.
- Examples: Conversations, speeches, presentations, phone calls.

Non-Verbal Communication:
- Definition: Communication through gestures, body language, facial expressions, and other non-verbal cues.
- Examples: Eye contact, hand gestures, posture, facial expressions.

Visual Communication:
- Definition: Communication through visual aids such as charts, graphs, diagrams, and images.
- Examples: Infographics, presentations using slides, charts in reports.

(3) Define the following :
   (a) Social Loafing   (b) Self Reflection

Ans. :

(a) Social Loafing

Social loafing refers to the phenomenon where individuals exert less effort when working in a group compared to when they are working alone. This behavior typically occurs because individuals feel less accountable for the outcome and believe their contribution is less noticeable within the group. Factors contributing to social loafing include a lack of motivation, low group cohesion, and the perception that others will pick up the slack.

(b) Self Reflection

Self-reflection is the process of introspection and examination of one's own thoughts, feelings, behaviors, and experiences. It involves taking time to think deeply about oneself, understanding personal strengths and weaknesses, and considering how one's actions align with personal values and goals. Self-reflection is a critical practice for personal growth, self-awareness, and improvement, allowing individuals to learn from their experiences and make more informed decisions in the future.

(4) Define Time Management. Explain a few time management strategies.

Ans. : Time management is the process of organizing and planning how to divide your time between specific activities. Good time management enables you to work smarter – not harder – so that you get more done in less time, even when time is tight and pressures are high. The key aspects of time management include setting goals, prioritizing tasks, scheduling activities.

Prioritization:

Planning and Scheduling:

Setting SMART Goals:

Delegation:
- Identify tasks that can be handled by others and delegate them to free up your time for more critical activities.

Limiting Distractions:
- Turn off notifications, set specific times for checking emails, and create a quiet, organized workspace to improve focus.

(5) Write any four advantages of DBMS.

Ans. :

Data Integrity and Consistency:
- DBMS ensures data integrity and consistency by enforcing rules and constraints, such as primary keys, foreign keys, and unique constraints. This helps in maintaining accurate and reliable data across the database.

Improved Data Security:
- DBMS provides robust security features, such as user authentication, role-based access control, and data encryption. This helps in protecting sensitive data from unauthorized access and breaches.

Efficient Data Management:
- DBMS allows for efficient storage, retrieval, and management of data. It uses indexing, query optimization, and transaction management techniques to improve the performance of data operations.

Data Redundancy and Inconsistency Reduction:
- DBMS minimizes data redundancy by normalizing data, which reduces data duplication and inconsistency. This ensures that changes in data are reflected consistently across the database.

(6) Define primary key and foreign key.

Ans. :

Primary Key:
- A primary key is a unique identifier for each record in a database table. It ensures that each record can be uniquely identified, and it cannot contain NULL values. A primary key can consist of a single column or a combination of columns (composite primary key).

Foreign Key:
- A foreign key is a field (or a collection of fields) in one table that uniquely identifies a row of another table. The foreign key establishes a link between the two tables, enforcing referential integrity.

(7) What is the use of DROP command in SQL ? Explain with example.

Ans. : In SQL, the DROP command is used to delete database objects such as tables, indexes, views, or databases themselves. It permanently removes the specified object from the database, along with all its data and associated metadata.

DROP TABLE table_name;

DROP DATABASE database_name;

(8) What is SQL ? What are different categories of command available in SQL ?

Ans. : SQL (Structured Query Language) is a standard language for interacting with relational databases. It's used for querying, updating, and managing data within a database management system (DBMS). SQL is essential for managing and manipulating data in databases.

Data Definition Language (DDL):
- DDL commands are used to define, modify, and drop database objects such as tables, indexes, and views. Examples include CREATE, ALTER, DROP, TRUNCATE, RENAME, etc.

Data Manipulation Language (DML):
- DML commands are used to manipulate data within tables. They include commands like SELECT, INSERT, UPDATE, and DELETE, which are used to retrieve, add, modify, and remove data from database tables.

Transaction Control Language (TCL):
- TCL commands are used to manage transactions within a database. They include commands like COMMIT, ROLLBACK, and SAVEPOINT, which control the changes made by DML statements.

Data Control Language (DCL):
- DCL commands are used to manage permissions and access rights within the database. They include commands like GRANT and REVOKE, which grant or revoke privileges to users.

III. Long Answer Type Questions : (Answer any two)   (2 X 3 = 6)

(1) Explain any three 7Cs of effective communication.

Ans. :

The 7Cs of effective communication are principles that guide the process of creating clear and meaningful messages. They are helpful in ensuring that communication is accurate, concise, and easily understood by the audience. Here are explanations of three of the 7Cs:
- Clarity: Clarity in communication means that the message is clear, easily understandable, and free from ambiguity.
- Conciseness: Conciseness refers to conveying information in a clear and efficient manner without unnecessary details or verbosity.
- Completeness: Completeness means providing all necessary information and details required for the receiver to fully understand the message.

(2) Explain the different approaches that people may follow to self explore.

Ans. :
- Formal/Informal/self directed learning leads to acquiring some skills
- Career Counsellor/computerized career information systems
- Self reflection/Inquiry
- Feedback

(3) Consider the following **EMPLOYEE** table and answer the SQL queries based on it.

Name of Column	ID	First_Name	Last_Name	User_ID	Salary
Type	Integer	Varchar(30)	Varchar(30)	Varchar(10)	Float

(i)   Create a table **EMPLOYEE.**
(ii) Insert any two records in a table.
(iii) Display ID, First name and Last name of employee having salary more than 5000.

Ans. :
(i)   Create table EMPLOYEE (ID int(5), First_Name varchar(30), Last_Name varchar(30), User_ID varchar(10), salary float);
(ii) Insert into EMPLOYEE values (2001, "Rakesh", "Sharma", "AB123", 25000);
      Insert into EMPLOYEE values (2024, "Ajay", "Verma", "XYZ25", 45678);
(iii) Select ID, First_Name, Last_Name from EMPLOYEE where salary>5000;

(4) Consider the following **MOVIE** table and answer the SQL queries based on it.

MovieID	MovieName	Category	ReleaseDate	ProductionCost	BusinessCost
001	Hindi_Movie	Musical	23-04-2024	124500	130000
002	Tamil_Movie	Action	17-05-2024	112000	118000
003	English_Movie	Horror	06-08-2024	245000	360000
004	Bengali_Movie	Adventure	04-01-2024	72000	100000
005	Telugu_Movie	Action	15-02-2024	100000	123456

(i) Display MovieID, MovieName and BusinessCost from MOVIE table.

(ii) List all movies which fall in the category of action.

(iii) List all movies whose MovieID = 003

Ans. :

(i) Select MovieID, MovieName, BusinessCost from MOVIE;

(ii) Select * from MOVIE where Category = "Action";

(iii) Select * from MOVIE where MovieID = 003;

……………………………………. XXXXXXXX …………………………………………