# Remember

1. Draw an ER diagram considering the scenario above.
2. State any assumptions that you make.
3. Identify functional dependencies for Office relation.
4. Is the schema in BCNF? State reasons if not.
5. Describe in brief about the von Neumann Architecture with the aid of a diagram.
6. List down the different types of bits and bytes relationships.
7. If a PC consist with 32 BIT memory, what is the memory capacity of that PC?
8. If a PC consist with 512MB of main memory (RAM), how many bits are used to address the memory locations of that PC?
9. How many characters are possible in ASCII?
10. If the ASCII code for the letter "A" is 65, what is the ASCII Code for the letter "D"?
11. Write down the truth table for the above-mentioned circuit
12. State and explain TWO reasons to justify your answer.
13. Identify the direct and indirect users for the scenarios given below.
14. Read the following case study related to “SLIIT Library Management” and answer the questions given below.
15. Cleary identify the processes related to the case study.
16. List down the activities need to be performed throughout the processes.
17. Identify the actors who perform those activities in the processes.
18. What is a database? Explain briefly
19. What is a database management system (DBMS)?
20. What is known as the ANSI/SPARC model? Give another name for the ANSI/SPARC model.
21. Draw the Three Schema Architecture. Name the three schemas.
22. What is the advantage of having the three schema architecture?
23. What is the advantage of using a DBMS for a bank?
24. What is a data model?
25. Name 2 types of Data Models and give some examples for each.
26. Describe the following terms.
27. What is the entity you should consider in order to answer the above query.
28. Can you suggest a suitable primary key for the entity you named?
29. List the attributes.
30. Identify a suitable primary key.
31. Identify a possible composite key.
32. Identify a possible candidate key.
33. Name some ER diagramming conventions.

# Understand

1. Explain the advantages of using a database approach in comparison to the file- processing  
   system?
2. Briefly explain each main step in the process of designing a DB for an application domain.
3. Convert the following EER diagram to the relational model
4. Identify functional dependencies for Office relation.
5. Illustrate how you obtained the keys.
6. If not, convert it to BCNF (ensure lossless join decomposition)
7. Describe in brief about the von Neumann Architecture with the aid of a diagram.
8. Explain in brief about the functions of each part listed in the von Neumann Architecture.
9. Give some examples for each data type you listed.
10. Explain how BCD works and limitation of it?
11. Represent following numbers in BCD format?
12. What was the reason to select Unicode to represent characters?
13. Write down the truth table for the above-mentioned circuit
14. Explain TWO instances where computer-based information systems (CBIS) are preferred over the manual information systems for a business.
15. Do you agree with this statement?
16. State and explain TWO reasons to justify your answer.
17. Explain this statement using your knowledge and examples on need for information systems/ information technology in business organizations.
18. Identify the direct and indirect users for the scenarios given below.
19. Cleary identify the processes related to the case study.
20. Identify the actors who perform those activities in the processes.
21. What is a database? Explain briefly.
22. Give example situations in which databases are used.
23. Give example DBMS available
24. Compare and contrast different Data storage mechanisms
25. Briefly explain the 3 schemas.
26. Describe the following terms.
27. Identify a suitable primary key.
28. Identify a possible composite key.
29. Identify a possible candidate key.

# Apply

1. Draw an ER diagram considering the scenario above.
2. Write down the candidate key(s).
3. Illustrate how you obtained the keys.
4. Consider the following schema and write relational algebra statements to cater the given queries
5. Consider the following schema and write relational algebra statements to cater the given queries
6. Draw a diagram showing the connection between the CPU and various devices and their access to memory.
7. Explain in brief about the functions of each part listed in the von Neumann Architecture.
8. Explain how BCD works and limitation of it?
9. What was the reason to select Unicode to represent characters?
10. Draw a circuit diagram for the simplified expression in part (c) using Basic Logic gates.
11. Write down the truth table for the above-mentioned circuit
12. Explain TWO instances where computer-based information systems (CBIS) are preferred over the manual information systems for a business.
13. Do you agree with this statement?
14. State and explain TWO reasons to justify your answer.
15. Explain this statement using your knowledge and examples on need for information systems/ information technology in business organizations.
16. Model process diagrams with the appropriate BPMN notations.
17. What is a database? Explain briefly
18. Draw the Three Schema Architecture. Name the three schemas.
19. Briefly explain the 3 schemas.
20. What type of data would they store in their database?
21. In the three schema architecture which schema describes details about the type of file organization used to store the above data?
22. In which step is the ER Model used?
23. In which step is the Relational Data Model used?
24. Can you suggest a suitable primary key for the entity you named?

# Analyze

1. Explain the advantages of using a database approach in comparison to the file- processing  
   system?
2. Illustrate how you obtained the keys.
3. Explain in brief about the functions of each part listed in the von Neumann Architecture.
4. What are the basic data types available to represent data in computers?
5. What are other character codes available?
6. Explain how BCD works and limitation of it?
7. What was the reason to select Unicode to represent characters?
8. Write down the truth table for the above-mentioned circuit
9. Explain TWO instances where computer-based information systems (CBIS) are preferred over the manual information systems for a business.
10. State and explain TWO reasons to justify your answer.
11. Explain this statement using your knowledge and examples on need for information systems/ information technology in business organizations.
12. What is a database? Explain briefly
13. Compare and contrast different Data storage mechanisms
14. Briefly explain the 3 schemas.
15. What are possible data required by an airline system?
16. In the three schema architecture which schema describes details about the type of file organization used to store the above data?
17. In which step is the ER Model used?
18. In which step is the Relational Data Model used?
19. Why is it not considered as the primary key?

# Evaluate

1. Explain the advantages of using a database approach in comparison to the file- processing  
   system?
2. Briefly explain each main step in the process of designing a DB for an application domain.
3. Consider the following requirements given in order to develop a database for the reservation system.
4. Draw an ER diagram considering the scenario above.
5. Consider the following requirements for a university database.
6. Consider the relation X(A,B,C,) is.
7. Consider the following schema and write relational algebra statements to cater the given queries
8. Consider the following schema and write relational algebra statements to cater the given queries
9. What are the basic data types available to represent data in computers?
10. What are other character codes available?
11. Write down the truth table for the above-mentioned circuit
12. Do you agree with this statement?
13. Compare and contrast different Data storage mechanisms
14. What do you mean by logical data independence and physical data independence.
15. What are possible data required by an airline system?
16. Is it necessary for them to use a DBMS?
17. Consider the steps in the database design process
18. What is the entity you should consider in order to answer the above query.
19. Consider the entity STUDENT in the SLIIT student information system

# Creating

1. Explain the advantages of using a database approach in comparison to the file- processing  
   system?
2. Briefly explain each main step in the process of designing a DB for an application domain.
3. Write down the candidate key(s).
4. Consider the following schema and write relational algebra statements to cater the given queries
5. Consider the following schema and write relational algebra statements to cater the given queries
6. Create the Employee table Department tables with following constraints
7. If a PC consist with 512MB of main memory (RAM), how many bits are used to address the memory locations of that PC?
8. How many characters are possible in ASCII?
9. What was the reason to select Unicode to represent characters?
10. Write down the truth table for the above-mentioned circuit
11. Can you suggest a suitable primary key for the entity you named?