

Database Management System

Probable Questions

Group -A

(Very short type questions, 20 no. s, 2 marks each)

- 1.What do you mean by DBMS ?
- 2.What are the disadvantage of file processing system?
- 3.What is Entity ?
- 4.What is Normalization ?
- 5.Define Primary key and Foreign key ?
- 6.What is the role of a DBA ?
- 7.Define Data Dictionary ?
- 8.What is View ?
- 9.What do you mean by lossless join ?
- 10.What is Entity ?
- 11.Name different types of data type used in SQL to create of database table ?
- 12.Define Data Redundancy in Database ?
- 13.What are the symbols used to create E-R model ?
- 14.What is the use of GRANT and ROLLBACK command ?
- 15.Name the types of database user ?
- 16.Define Data Abstraction ?
- 17.Define Encryption and it's types of techniques ?
- 18.What do you mean by Schedule ?
- 19.List out all the states of transaction ?
- 20.What is Authentication ?

Group-B

(Short type questions, 15 nos , 5 marks each)

1. What is the Purpose of Database Systems?
2. What are the Various Database users?
3. Explain different types of Database Languages.
4. Explain briefly the Importance of Data Dictionary.
5. What is Data Independence? Explain it.
6. What is an Attribute? Describe the Various Types of Attributes used in ER-Model.
7. What do you mean by Mapping Constraint? Explain it with Suitable Example.
8. What do you mean by Relational Algebra? Explain different types of Operations used in database with suitable examples.
9. What is a Lossless Join?
10. What do you mean by BCNF? Explain with suitable example.
11. Write down the Syntaxes of CREATE, SELECT, UPDATE and INSERT commands used in SQL and explain them with suitable Examples.
12. What is relationship set and explain with suitable example ?
13. Explain the 2-Phase Locking Concept with suitable example.
14. How Recovery can be done in case of a Database System failure?
15. Discuss the Idea behind Encryption Technique?

Group-C

(Long type questions, 10 no. s, 10 marks each)

1. Describe three-level architecture of Database with a suitable diagram ?

2. Define Normalization. Compared between 1NF, 2NF, 3NF ?
3. What is join? Explain different types of join used in DBMS with example ?
4. What do you mean by Data Model? Describes the types of Data model ?
5. Define concurrency control. Explain different types of lock used in DBMS ?
6. Define database. Explain advantages and disadvantages of DBMS ?
7. What is Transaction? Explain the State and properties of transaction ?
8. What is Lock. Explain different types of Lock ?
9. Define E-R diagram. Expand with suitable example by using different symbols ?
10. Write short notes on (2.5 x 4)
 - (a) DML
 - (b) Data Encryption
 - (c) DBA
 - (d) Authorization

4Th Semester Computer Science & Engineering
Data Communication and Computer Network(Th-02)

Probable Questions for Council Examination

Group- A

(Twenty very short type Questions, 2 marks each)

1. What do you mean by Data communication ?
2. Distinguish between half duplex and full duplex mode.
3. Define protocol.
4. Define Line configuration.
5. Define Network . Name different types of Networks.
6. Define Channel capacity in Shannon's Theorem.
7. What is the difference between Datagram and Virtual circuit ?
8. Distinguish between bit rate and baud rate.
9. Email id, MAC address, IP address, port address. Map them to the respective layers of OSI model.
10. Define switch and mention its use.
11. Define Transmission impairments. What are they?
12. Define error detection. Name types of error detection methods.
13. Define data encoding.
14. Define internet protocol.
15. What is Traffic Management.
16. Define Congestion.
17. Define Multiplexing. State its types.
18. What is Network criterion.
19. Define Hamming distance and find hamming distance between 101 and 011.
20. Define Datagram.

Group- B

(15 long type questions , 5 marks each)

1. What do you mean by modes of data communication ?
Discuss various data transmission modes.
2. Compare Circuit switching and packet switching network.
3. What is transmission impairment ? Briefly explain various causes of transmission impairment.
4. Define digital to analog conversion . Explain the major three mechanisms used to convert digital data to analog signals.
5. What do you mean by multiplexing ? Explain FDM and TDM.
6. Describe the Asynchronous and Synchronous mode of data transmission.
7. Define Network topology. Describe various Network Topology.
8. Explain TCP/IP protocol suite.
9. Explain various types of data transmission modes.
10. Define Channel capacity. Explain Shannon's capacity formula.
11. Explain Routing in packet switching Networks.
12. Represent the digital data 10110, in digital signal using Manchester encoding and differential Manchester encoding.
13. Compare Datagram and virtual circuit approach in packet switching technology.
14. Describe Mesh topology with a neat diagram. Mention its advantages and disadvantages.
15. Explain checksum error detection method with an example.

Group- C

(10 very long type Questions, 10 marks each)

1. What is transmission media. Classify it and discuss all types of transmission media.
2. What is the goal of multiplexing ? Explain different multiplexing techniques in detail.
3. Explain seven layers of OSI model.
4. Define congestion. What is the effect of congestion? Explain the methods of congestion control.
5. What is CRC ? Explain the role of CRC technique in error detection. For the data word 1101 and divisor 1011 , generate the code word at the sender site and also show the checking of the code word at receiver side assuming no error.
6. Compare OSI model and TCP/IP model with diagrams . Discuss various responsibilities of physical and data link layer.
7. Discuss about different modulation techniques.
8. Define flow control mechanism. Explain sliding window and stop -and -wait protocol .
9. Describe the functions of Bridge, hub and switches.
10. Write short notes on any two –
 - (i) X.25
 - (ii) Virtual circuit
 - (iii) Optical fibre
 - (iv) CSMA/CD

Operating Systems(Th-1, 4th sem)

Group A

(TWENTY PROBABLE SHORT QUESTIONS, EACH OF 2MARKS)

1. What is operating system? Name of two os?
2. Differentiate between multiprogramming and time sharing concept used by Operating system?
3. Define interacting processes?
4. Define Semaphore?
5. What are the function of PCB?
6. Define page fault?
7. State context switching?
8. Define Segmentation. Give one example?
9. Define Swapping?
10. Define spooling?
11. What is deadlock?
12. What are 4 conditions of deadlock?
13. Define file system?
14. State the different types of files?
15. How a file can be protected?
16. Define System software or system program?
17. What is compiler?
18. What is traffic controller?
19. What is process?
20. Define race condition?

GROUP B

(FIFTEEN PROBABLE QUESTIONS, EACH OF 5 MARKS)

1. Distinguish between multiprogramming & Multiprocessing os?
2. Distinguish between Network os & distributed os?
3. Short notes on function of operating system?
4. Short notes on process synchronisation?
5. Define PCB? Explain different fields of PCB?
6. Define Swapping? Explain process of Swapping with suitable example?
7. Short notes on Techniques of device management?
8. Short notes on Banker's Algorithm?
9. Write the conditions of deadlock occurrence?
10. Short notes on secondary storage management?
11. What is system reliability in file management?
12. What is a file? Explain file access methods?
13. Write short note on compiler and application program?
14. What is the function of compiler?
15. Explain demand paging in memory management?

GROUP C

(TEN PROBABLE QUESTIONS, EACH OF 10 MARKS)

1. Explain structure of operating system with suitable example?
2. Identify function of operating system and explain?
3. Define process? Draw a diagram to explain different state of a process with the state transition?
4. State & explain job scheduling?
- 5 . define device management. Explain the function of I/O scheduler & I/O device handler?
6. Define device management. Write the 3 major techniques of device management?
7. Explain necessary conditions for deadlock. How deadlock is detected, prevented and recovered?
8. State and explain Banker's algorithm to avoid deadlock?
9. Explain file access methods and how disk space is allocated efficiently?
10. What is functions of compiler? Explain the seven phases of compiler?