

Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur
Directorate of Distance Education
PROFESSIONAL/TECHNICAL
MCA/3RD/MCA14/13-16: Data Base Management Systems
MODEL QUESTIONS (Full Marks -70)
ANSWER ANY FIVE QUESTIONS

01. What are the functions of a Database Administrator?
02. What are the advantages of a DBMS?
03. What is Relation with respect to relational schema and relational instance?
04. What are relational constraints define them in brief.
05. What is relational algebra? What are the main operations in Relational algebra?
06. What is Locking and define the locking techniques in detail?
07. Define some of the DML command used in Network model?
08. What is failure in respect to database and define the types of failure?
09. Define different types of SQL commands.
10. What is the syntax of update and delete command?
11. Explain Logical DBMS Architecture and also define three different database levels.
12. Give the relational terminology for the commonly used in database terms.
13. Why database? What is the use of database? Write down important characteristics of data in a database.
14. What are Privileges? What is the use of granting and revoking permissions? Explain with example.
15. Write short notes on any two:
 - a) Insert statement
 - b) Update
 - c) DDL (Data Description Language)

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PROFESSIONAL/TECHNICAL
MCA/3RD/MCA15/13-16: Computer Communication Network
MODEL QUESTIONS (Full Marks -70)
ANSWER ANY FIVE QUESTIONS

01. What are the two models of Network architecture?
02. What is private Bandrate and Bandwidth with examples?
03. Differentiate between synchronous and asynchronous communication.
04. Explain different topologies of network. E.g. 802.3, 802.4, 802.5.
05. What are the flow control mechanism? Stop & wait / sliding window protocol.
06. What is multiplexing? Explain with TDM & FDM.
07. What is HDLC and the communication takes place with the help of I-frame, U-frame and S-frame.
08. What is difference between analog and digital signal?
09. How the signal are represented (ASK, PSK, FSK) explain with the help of Diagram?
10. What is encoding? Explain PCM.
11. Compute the bandrate for 72000 QAM signal and draw the constellation diagram for 2 AMP 8 Phase.
12. What is bit stuffing and byte stuffing? What is the importance of the above? Explain with the help of example?
13. Compare and contrast between TCP and UDP.
14. What is IP addressing? What is subnet mask? Explain all the Classes
15. Write short notes on any two:-
 - a) FTP
 - b) TELNET
 - c) Hub/Switch

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PROFESSIONAL/TECHNICAL
MCA/3RD/MCA16/13-16: Object Oriented Analysis and Design
MODEL QUESTIONS (Full Marks -70)
ANSWER ANY FIVE QUESTIONS

1. What is grouping construct? How many types of grouping constructs are there? Explain them by taking some example.
2. Compare and contrast aggregation and generalization. What are different types of aggregation? Explain them by taking some example.
3. Explain the concept of generalization as extension of existing class as well as restriction on existing class by taking some example.
4. Explain the concept of events and states by taking some example. What is difference between event trace diagram and scenario? Explain it by taking an example.
5. What do you mean by functional modeling? Explain following components of a data flow diagram:
1. Process 2. Data Flow 3. Actor/Terminator 4. Data Store
6. What do you mean by object oriented system analysis? Explain the process of analysis from the problem statement given by client.
7. Explain the steps taken by system analysts during object modeling phase.
8. List the process of identification of various components of DFD by system analyst.
9. Explain the process of breaking up a system into subsystems by explaining the concept of layers and partitions.
10. What do you mean by software control implementation? Explain in detail the concept of external and internal control implementation.
11. What is object design? Describe the steps taken by designer during this process. Also explain the concept of design optimization.
12. Explain the concept of re usability, extensibility and robustness in respect to object oriented programming environment.
13. Write a class in C++ to implement the class representing points in a two dimensional plane. Include constructors and methods in this class. There should be methods to calculate the distance of a point from origin.
14. What do you mean by in line function in C++. Explain its concept by taking an example.
15. Write short notes on any two:-
a) Abstract Data Type b) Polymorphism c) Default argument

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PROFESSIONAL/TECHNICAL
MCA/3RD/MCA17/13-16: Computer Management Support System
MODEL QUESTIONS (Full Marks -70)
ANSWER ANY FIVE QUESTIONS

1. Explain different types of intelligent agents.
2. What are attributes of intelligent behavior?
3. Explain the role of on line analytical processing system in DSS.
4. Explain Executive Information System (EIS) and its use.
5. What is Geographic Information System (GIS) and explain its application in DSS.
6. What are DSS components? Explain it.
7. What is the role of data mining in DSS?
8. What is data warehouse and how it helps in developing an effective DSS?
9. Explain Enterprise Information Portal(EIP) and its use.
10. What is Knowledge Management System and how does it help the management?
11. What are domain of Artificial Intelligence Based Software?
12. What is expert system? Explain concept of an expert system.
13. Explain neural networks and fuzzy logic system?
14. Compare operational database and analytical database.
15. Write short notes on any two of the following:
 - a) Exception Reports
 - b) Robotics
 - c) Genetic Algorithm in AI

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PROFESSIONAL/TECHNICAL
MCA/3RD/MCA18/13-16: Statistical Computing
MODEL QUESTIONS (Full Marks -70)
ANSWER ANY FIVE QUESTIONS

1. What are the measure functions of statistics? Examine the use of statistical computing of the problems relating to management and technology.
2. What do you understand by frequency distribution? Explain how a frequency distribution is formed and presented.
3. What are the properties / characteristics of a good average? Why arithmetic means is known to be the best average.
4. What is standard deviation? Why standard deviation is known to be a good measure of dispersion.
5. Explain the meaning of moments. And discuss the methods of calculating the moments.
6. What is regression analysis? Why are their two regression lines and point out the circumstances when only one regression line is obtained?
7. What is time series analysis? And discuss the methods of calculating secular trend from a time series data.
8. What is sampling method of inquiry? What are various methods of sampling?
9. What is hypothesis testing? And discuss the type 1 and type 2 errors in content to hypothesis testing.
10. The following data relate to the age of 10 employees and the no. of days which they reported sick in a month:-
Age : 20 30 32 35 40 46 52 55 58 62
Sick days: 11 12 10 13 14 16 15 17 18 19
11. Calculate the co-efficient of correlation from the following data:-
X: 9 8 7 6 5 4 3 2 1
Y: 15 16 14 13 11 12 10 8 9
12. Problem of Kalpearson's coefficient of correlation.
13. Problem of Mean deviation and standard deviation.
14. Problem of Regression. To find out regression equations and regression lines from the given data of X and Y variables.
15. Application of chy square test and F-test.