

S.No. 18035

MCA, Semester-II Examination, May 2018
Computer Network and Data Communication

Time: 3 Hours

Marks:80

Note: *Attempt five questions in all, selecting one question from each of the four units. Q. No. 1 is compulsory.*

- Q. 1 Compulsory question: 8x3=24
- i. List the feature of wide area network.
 - ii. Discuss the features and applications of Frame relay.
 - iii. List the factors affecting the digital and analog data transmission.
 - iv. What do you mean by transmission impairments?
 - v. Discuss the features of collision free protocol.
 - vi. List the applications of GSM network.
 - vii. Explain: "routing for mobile host".
 - viii. What do you mean by load shedding?

UNIT-I

- Q. 2 Compare the TCP/P and OSI models on the basis of their working principles. 14
- Q. 3 Discuss the design issues of various network architectures. 14

UNIT-II

- Q. 4 Explain the working principal of coaxial cable and twisted pair with diagram. 14
- Q. 5 Discuss the terms: trasponder, uplink frequency, downlink frequency, communication medium carrier signal and type of multiplexing with reference to satellite communication. 14

UNIT-III

- Q. 6 Discuss the features of IEEE 802.3 standards along with its advantages and disadvantages. 14
- Q. 7 Explain the working of DQDB (Distributed Queue Dual Bus). 14

UNIT-IV

- Q. 8 What do you mean by Distance vector routing and Link state routing? 14
- Q. 9 Write short note on: Virtual Circuit, Choke packet and Datagram subnet. 14

S.No. 18014

MCA, Semester-II, May 2018
Operating System

Time: 3 Hours

Marks:80

Note: Attempt five questions in all, selecting one question from each of the four units. Q. No. 1 is compulsory.

- Q. 1 Explain following: 8x3=24
- i. System call
 - ii. Functions of operating system
 - iii. Semaphores
 - iv. Monitors
 - v. Security
 - vi. Recovery
 - vii. Filters
 - viii. Vi editor

UNIT-I

- Q. 2 State and explain the concept of CPU scheduling. Discuss various types of scheduling algorithms. List their merits and demerits. 14
- Q. 3 What is an operating system? Explain various types of operating system. Discuss various services provided by an operating system. 14

UNIT-II

- Q. 4 What is a deadlock? Explain various conditions that enable deadlock occur. Discuss the method used for detection and recovery from deadlock. 14
- Q. 5 What is critical section problem? State and explain the classical process coordination problem and their solution. 14

UNIT-III

- Q. 6 (a) Compare paging, segmentation and swapping. 7
(b) Discuss various methods used for file allocation. 7
- Q. 7 Discuss various goals and principles of protection. Explain the role of access matrix. 14

UNIT-IV

- Q. 8 Explain regular expressions in linux. Describe syntax of following command:- cut, head, sort, grep, sed. 14
- Q. 9 (a) Briefly explain concept of while and do while in shell programming. 7
(b) Write a shell program to find factorial of a number. 7
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MCA, Third Semester Examination, May 2018
Data Base Management System

Sr. No. 9032

Time: 3 Hours

Max. Marks: 80

Note: Attempt any five questions, selecting one question from each unit. Question No. 1 is compulsory.

1.

8x3=24

- a) What is DBMS? Explain all the functions performed by DBMS.
- b) Describe data abstraction and data integration with example.
- c) Define primary key & foreign key.
- d) What do you mean by RDBMS? Explain its application.
- e) Explain Domain key.
- f) Explain recovery technique in centralized DBMS.
- g) What do you understand by time stamp ordinary?
- h) Explain the method for controlling the user access to database for security.

Unit - I

2. What is data base administration? Explain the detail and responsibility of DBA. 14
3. What do you mean by centralized data model? Differentiate between network and hierarchical data model. 14

Unit - II

4. What is the normalization data base mode? Explain them with examples. 14
5. Write SQL commands syntax for update, alter, truncate, grant, revoke, join and view using suitable examples. 14

Unit - III

6. What is data base design? Explain the role of information system in organization. 14
7. Differentiate between BCNF and multi-valued dependencies. 14

Unit - IV

8. What do you mean by transaction? Explain the different type of transaction. Also describe the property of transaction. 14
9. What are various threats to data security? Explain how you will protect them. 14