

11

Code No.1732

FACULTY OF SCIENCES  
MCA III – SEMESTER REGULAR EXAMINATIONS, DEC- 2023  
**COMPUTER NETWORKS**  
PAPER – II

Time: 3 hours]

[Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. Write about RS-232 interface.
2. What is error detection? List the various error detection techniques and explain any one of them.
3. Explain IPV4 addressing and sub netting format.
4. Briefly explain QOS.
5. What id FTP? Briefly explain about FTP protocol.

Section – B

Answer the following questions in not more than **FOUR** page each: (5x10=50)

6. a) Explain TCP/IP reference model.  
(OR)  
b) What are the various types of network topology? What are the implications of having different topologies?
7. a) List the various elementary DLL protocols and Explain sliding window protocol.  
(OR)  
b) Draw and explain 802.3 frame format and its performance.
8. a) Explain Link state routing algorithm with an example.  
(OR)  
b) Explain the OSPF and BGP protocols.
9. a) Draw and explain in detail the TCP header.  
(OR)  
b) Draw the header part UDP protocol. Explain the components. In what application UDP is used and why?
10. a) Briefly explain about primitive and advance system calls.  
(OR)  
b) What is DNS? Explain usage of resource records.

--oOo--

FACULTY OF SCIENCES  
MCA III – SEMESTER REGULAR EXAMINATIONS, DEC- 2023  
**DATA SCIENCE**  
PAPER – III

Time: 3 hours]

[Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – AAnswer the following questions in not more than **ONE** page each: (5x4 = 20)

1. What are the different R objects? Give example for each.
2. What is a Data Frame? Write the command to create Data Frame for dummy dataset.
3. Which function is used to determine the degree and direction of linear association. Write its syntax.
4. What is Decision Tree? Give example.
5. Explain Mining Algorithm Interfaces.

Section – BAnswer the following questions in not more than **FOUR** page each: (5x10 = 50)

6. a) Explain Challenges of Analytical Data Processing and Missing Values Treatment in R.  
(OR)  
b) Explain Methods for Reading CSV, JSON and XML file in R with examples.
7. a) Explain the functions in R which are used for Data Summary and Descriptive Statistics With examples.  
(OR)  
b) What is Histogram and Barchart? Create data (8, 13, 30, 5, 28, 20) Write the functions to create the histogram and barchart ( simple) and save the file.
8. a) What are Linear Regression Assumptions? Explain Linear Regression technique in detail by applying on a dataset?  
(OR)  
b) Explain Logistic Regression in detail.
9. a) Explain Decision Tree Learning Algorithm and its measuring features with an example.  
(OR)  
b) What are functions which are used in R to read and store time series data? Explain ARIMA Models in detail.
10. a) What is Clustering? Explain Hierarchical Clustering in detail  
(OR)  
b) Discuss about Frequent Item Set and Apriori Algorithm in detail.

--oOo--

IV

Code No.17348

FACULTY OF SCIENCES  
M. C. A. III – SEMESTER REGULAR EXAMINATIONS, DEC- 2023  
**WEB TECHNOLOGIES**  
PAPER – IV

Time: 3 hours]

[Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

**Section – A**

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. What is the structure of HTML document? Explain with example.
2. Define Data Binding.
3. Explain the role of JavaScript in developing Web Applications.
4. Define VB Script. Write about VB Script Operators.
5. Write about session tracking.

**Section – B**

Answer the following questions in not more than **FOUR** page each: (5x10=50)

6. a) Explain different types of Lists in HTML with example.  
(OR)  
b) Explain internal and inline cascading style sheets with code.
7. a) Explain different properties and methods associated with Document Object Model.  
(OR)  
b) Explain the key features of Dynamic HTML and write its advantages and disadvantages.
8. a) What is an Array? How to pass Arrays to functions as parameters? Explain with JavaScript Code.  
(OR)  
b) Explain JavaScript Data types with suitable example.
9. a) What is Server? What are the functions of server? Explain installation of different servers.  
(OR)  
b) Explain Control Structures in VB Script with example.
10. a) Discuss about Client Side Scripting Vs Server Side Scripting. Explain Server Side Active X Component.  
(OR)  
b) Explain XML Parser and DTD.

--oOo--

VI

Code No.1736A

FACULTY OF SCIENCES  
MCA III – SEMESTER REGULAR EXAMINATIONS, JAN- 2024  
**DISTRIBUTED SYSTEMS**  
PAPER – VI (a)

Time: 3 hours]

[Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

**Section – A**

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. Explain the various communicating entities in distributed systems.
2. Write the brief note on consistency and replication.
3. Write a short note on Fault Tolerance and Security.
4. Describe about Web-Based systems.
5. Write a short note on Synchronization.

**Section – B**

Answer the following questions in not more than **FOUR** page each: (5x10=50)

6. a) Write in detail about Stream-Oriented communication.  
(OR)  
b) Describe and distinguish between Architectures and Middleware.
7. a) Mention the essential requirements for Mutual exclusion.  
(OR)  
b) Discuss any two Data - Centric Consistency Models.
8. a) Discuss in detail about Consistency and Replication.  
(OR)  
b) List and explain the parts of a distributed object Model.
9. a) Explain the functions of File Service Architecture.  
(OR)  
b) Give a note on communication and synchronization.
10. a) Write about Coordination Models.  
(OR)  
b) What is the Map-Reduce programming model? Explain.

--oOo--