ગુજરાત વિદ્યાપીઠ : અમદાવાદ

પરીક્ષાર્થી ક્રમાંક

વિદ્યાશાખા: માહિતી, પ્રત્યાયન અને પ્રૌદ્યોગિકી વિદ્યાશાખા

વિભાગ કમ્પ્યુટર વિજ્ઞાન વિભાગ

અભ્યાસક્રમ: MCA સત્ર: 2

વસંત પંચમી સત્રાંત પરીક્ષા : મે - 2025

MCA203: કમ્પ્યુટર નેટવર્ક

તા.: 02/05/2025 સમય: 08-00 થી 10-30

વાર: શુક્રવાર કુલ ગુણ: 60

લર્નિંગ આઉટકમ

1. Work with Data Communication, Architecture, Protocols and Standards
2. Implement functions of OSI and TCP/IP Layers
3. Configure Network using Topologies and Transmission Media
4. Understand concepts of Flow Control, Routing, Addressing and Transport Protocols
5. Work with Network and Information Security

Que.1 (A) Answer the Following. (Any Five) **05**

(1) What is Data Communication?

(2) Explain: Jitter

(3) Define: Protocol

(4) Write full name: Pixel

(5) Explain: Burst Error

(6) What is De facto Standard?

(7) Define: Redundant Bit

(8) Explain: Network Criteria

(B) Answer the Following. (Any Two) **04**

(1) Write Short Note (ટૂંક નોંધ લખો): Network Topology

(2) Differentiate (તફાવત લખો): Guided Media and Unguided Media

(3) Write Short Note (ટૂંક નોંધ લખો): LAN and WAN

(4) Differentiate (તફાવત લખો): Error Detection and Error Correction

(C) Answer the Following. (Any One) **06**

(1) Explain in detail about OSI Model.

(2) Discuss about functions of Data Link Layer.

Que.2 (A) Answer the Following. (Any Five) **05**

(1) “Data link layer needs to pack bits into frames.” True or False?

(2) What is Correction by Retransmission?

(3) Define: Flow Control

(4) “In fixed size framing there is need for defining boundaries.” True or False?

(5) Write Class of 20.24.121.9 IP Address.

(6) “IPv6 address is 132 bit long.” True or False?

(7) What is Supernetting?

(8) Write full name: ICMP

(B) Answer the Following. (Any Two) **04**

(1) Write Short Note (ટૂંક નોંધ લખો): Stop and Wait Protocol

(2) Differentiate (તફાવત લખો): Noisy Channel and Noiseless Channel

(3) Write Short Note (ટૂંક નોંધ લખો): IPv4 Address

(4) Differentiate (તફાવત લખો): Connection Oriented and Connectionless Forwarding

(C) Answer the Following. (Any One) **06**

(1) What is Bluetooth? Explain in detail.

(2) Discuss in detail about functions of Network Layer.

Que.3 (A) Answer the Following. (Any Five) **05**

(1) What is Client-Server Architecture?

(2) Define: Well Known Port Number

(3) Write full name: RFC

(4) Define: Process to Process Delivery

(5) What is IANA?

(6) Explain Sending Buffer in TCP.

(7) Define: RPC

(8) Write full name: ICANN

(B) Answer the Following. (Any Two) **04**

(1) Write Short Note (ટૂંક નોંધ લખો): Connection Management in Transport Layer

(2) Differentiate (તફાવત લખો): Multiplexing and Demultiplexing

(3) Write Short Note (ટૂંક નોંધ લખો): Congestion Control

(4) Differentiate (તફાવત લખો): UDP and TCP

(C) Answer the Following. (Any One) **06**

(1) Discuss in detail about functions of Transport Layer.

(2) Explain in detail about Port Number and Socket Address.

Que.4 (A) Answer the Following. (Any Five) **05**

(1) Write use of DNS.

(2) Write full name: FQDN

(3) What is SMTP?

(4) Write full name: MIME

(5) What is Plain Text?

(6) Give example of Shift Cipher.

(7) Explain: Public Key

(8) Define: Transposition Cipher

(B) Answer the Following. (Any Two) **04**

(1) Write Short Note (ટૂંક નોંધ લખો): TELNET

(2) Differentiate (તફાવત લખો): First Scenario and Second Scenario in E-Mail

(3) Write Short Note (ટૂંક નોંધ લખો): Substitution Cipher

(4) Differentiate (તફાવત લખો): Symmetric Key and Asymmetric Key Cryptography

(C) Answer the Following. (Any One) **06**

(1) What is POP3 and IMAP4? Discuss in detail.

(2) Explain in detail about Information Security.

———————————