



**COLLEGE OF ENGINEERING, SCIENCE AND TECHNOLOGY
SCHOOL OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**TRADE DIPLOMA IN ELECTRONICS ENGINEERING
(TELECOMMUNICATION & NETWORKING)**

EEE561 COMPUTER AND DATA COMMUNICATION

FINAL EXAMINATION (TRIMESTER 3, 2015)

DATE/TIME/ROOM – Refer to Timetable

INSTRUCTIONS TO CANDIDATES

1. You are allowed 10 minutes extra time during which you are not to write.
2. Begin each answer on a fresh new page and use both sides of the sheets.
3. Write your identification number on the top of each attached sheet.
4. Insert all written foolscaps, graph paper, drawing paper etc. in their correct sequence and secure with string provided.
5. For all sheets of paper in which rough work has been done, cross it through and you must attach to your answer script.
6. Write clearly the number(s) of the question(s) attempted on the top of each sheet.
7. The paper contains three sections, Sec- A; Sec- B & Sec- C
8. **ATTEMPT ALL QUESTIONS IN SEC-A AND SEC- B AND ANY 4 IN SEC-C.**
9. Always check your work before you leave the exam room.
10. Total time duration is 3 hours 10 minutes.

SECTION A:- MULTIPLE CHOICE (1 x 20 = 20 MARKS)

1. Routers operate at which layer of the OSI Model?
A) Transport B) Network
C) Physical D) MAC sub layer of the Data Link layer
2. Bits are packaged into frames at what layer of the OSI Model?
A) Transport B) Application
C) Data Link D) Presentation
3. Which protocol does DHCP use at transport layer?
A) IP B) TCP
C) UDP D) ARP
4. Encryption takes place at which layer?
A) Presentation B) Data Link
C) Physical D) Session
5. What layer establishes, maintains, & terminates communications between applications located on different devices?
A) Session B) Data Link
C) Application D) Network
6. Which layer translates between the physical (MAC) & logical address?
A) Data Link B) Application
C) Network D) Presentation
7. What are the sub layers of the Data Link layer?
A) hardware & frame B) Mac address
C) MAC & IPX D) MAC & LLC
8. In the TCP/IP protocol suite, where is CSMA/CD to be found?
A) At the Internet Layer B) At the Transport Layer
C) At the data link sub layer of the network access layer
D) None of the above
9. Which of the following is not a type of computer networks?
A) LAN B) PAN
C) Remote area network D) Metropolitan area network
10. Which is the most dominant LAN technology?
A) Token Ring B) ATM
C) Ethernet D) None of the above
11. What addressing information is shipped with every network interface card?
A) The internet protocol (IP) address.
B) The physical (MAC) address.
C) The address resolution protocol.
D) None of the above

12. Which color coding is used to connect similar devices?
 A) Straight cable B) Cross over cable
 C) Serial cable D) All of the above
13. HTTP is a protocol use to view the webpages.
 A) True B) False
14. Which of the following is/are true?
 A) Collision detection can be employed in wireless network
 B) Collision avoidance can be employed in wireless networks
 C) Carrier sensing ensures that the packet to be transmitted does not collide
 D) Channel partitioning provides statistical multiplexing of flows
15. Which of the following describe router functions?
 A) Packet switching C) Packet filtering
 B) Internetwork communication D) All of the above
16. Hubs operate at _____ layer.
 (A) Network (B) Application
 (C) Physical (D) Session
17. In IEEE standards 802.5 standard is called
 (A) Ethernet (B) Token Bus
 (C) Wi-Fi (D) Token Ring
18. Campus network is example of
 (a) LAN (b) WAN
 (c) MAN (d) Wi-Fi
19. The X.25 standard specifies the
 (a) Technique for start – stop data
 (b) DTE/DCE interface
 (c) Data bit rate
 (d) None of the above
20. Which of the following performs modulation and de-modulation
 (a) Modem (b) Fiber Optics
 (c) Coaxial cable (d) Satellite

SECTION B: SHORT ANSWER QUESTIONS (10 x 4 = 40 MARKS)

1. What is SMTP and DNS?
2. Explain the role of a DNS on a computer network.
3. What do you mean by TCP socket?
4. What is mean by circuit switching?
5. What do you mean by broadcast & unicast domains?
6. What is the function of the OSI Session Layer??
7. Explain coaxial cable, twisted pair cable & fiber optic cable with its example of usage.

8. What do you mean by protocols?
9. What do you mean by Wide area network? In how many ways it can be connected?
10. What do you understand by IP? Give some examples of private network addresses.

SECTION C: Attempt any four each carry 10 marks (10 x4= 40 marks)

1. What do you mean by OSI model? Explain its various layers
2. Explain the following terms.
 - (a) Round trip Time
 - (b) Packet switching
 - (c) Ethernet standards
 - (d) Response time
3. What do you mean by TCP 3 way handshaking? Explain with the help of suitable diagram.
4. Distinguish between the
 - (a) Switching and Routing
 - (b) LAN, MAN and WAN
 - (c) TCP and UDP
5.
 - (a) What do you mean by network topologies?
 - (b) What are its five types?
 - (c) Write advantages and disadvantages of Bus topology.
6.
 - (a) What do you mean by FTP?
 - (b) Explain the operation of Active and passive FTP?
7. Explain TCP and UDP header in detail with the help of diagram.
8. What are the different kinds of cables? Explain the advantages and disadvantages. Give at least one application.

[THE END]