



**UNIVERSITY OF MINES AND TECHNOLOGY,**  
**FIRST SEMESTER EXAMINATIONS, NOV/ DEC 2018**

**COURSE NO:** CE 475  
**COURSE NAME:** COMPUTER NETWORKS  
**CLASS:** CE IV **TIME:** 3

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Name: \_\_\_\_\_ Index Number: \_\_\_\_\_

**Answer all questions in Section A and any three two in Section B. Circle your answers in Section A**  
**SECTION A**

1. In the OSI model, the \_\_\_\_\_ layer is concerned with finding the best path for the data from one point to the next within the network
  - a. Data Link
  - b. Network
  - c. Physical
  - d. Application
2. Which category of UTP cable is the most current and commonly implemented?
  - a. Category 4
  - b. Category 5
  - c. Category 5e
  - d. Category 6
3. The \_\_\_\_\_ of a signal is the number of times a signal makes a complete cycle within a given time frame.
  - a. Bandwidth
  - b. Frequency
  - c. Amplitude
  - d. Spectrum
4. In the OSI model, which layer performs encryption or data compression?
  - a. Application
  - b. Network
  - c. Presentation
  - d. Data Link
5. The loss of signal strength is called:
  - a. Attenuation
  - b. Noise
  - c. Crosstalk
  - d. Amplitude
6. \_\_\_\_\_ is a network diagnostic tool
  - a. Electrical Testers
  - b. Protocol Analyzers
  - c. Network Testers
  - d. All of the above
7. A modem is typically connected to a computer through a
  - a. Serial port
  - b. NIC



- c. FTP
- d. Telnet
18. Which type of routing allows each node to maintain its own routing table?
- a. Distributive
- b. Adaptive
- c. Centralized
- d. Static
19. In a \_\_\_\_\_ subnet, no unique dedicated physical path is established to transmit the data packets across the subnet?
- a. Circuit-Switched
- b. Packet-Switched
- c. Large
- d. Heavily Loaded
20. A dial-up telephone system uses which type of subnet?
- a. Circuit-Switched
- b. Packet-Switched
- c. Broadcast
- d. Logically Switched
21. The protocol that allows dynamic assignment of IP Addresses to workstations is known as:
- a. ICMP
- b. DHCP
- c. SMTP
- d. SNMP
22. . What type of cable uses light waves to carry information at high speed?
- a. Cable modems
- b. Fibre-Optic Cables
- c. Wireless
- d. Phone Lines
23. The main difference between infrared and Bluetooth transmission is that Bluetooth needs line of site whilst infrared does not
- a. True
- b. False
24. Synchronous Time Division multiplexing will not allocate a time slot to a source that is idle
- a. True
- b. False
25. The following are the different Phases of System Development Life Cycle except
- a. Planning Phase
- b. Design Phase
- c. Development Phase
- d. Implementation Phase
26. Every object on the Internet has a unique URL
- a. True
- b. False
27. In a virtual circuit packet-switched subnet, all packets that belong to a logical connection can follow the same path through the network
- a. True
- b. False
28. The rules for exchanging data between a terminal and one or more computers is known as
- a. Protocol
- b. Algorithm
- c. Procedure
- d. Set of Laws
29. A basic computer network can be described as

- a. a minimum of five computers linked together
- b. Computer and cables that link the network together
- c. two or more computers that are linked together
- d. the use of satellites linking computers together

30. Which statement is FALSE about wireless networks?

- a. Wireless networks are convenient
- b. Wireless networks are slower than wired LANs
- c. Wireless networks use radio transmitters
- d. Wireless networks are faster than wired networks

### SECTION B

1.
  - a. Describe the operations of Open System Interconnection model as compare to TCP/IP model
  - b. Differentiate between wired and wireless media. Hence, discuss one example in each.
  - c. Discuss the media selection criteria
  
2.
  - a. What are the functions of Network Operating System? Hence, how does CSMA/CA work?
  - b. Discuss the skills a good network manager must possess.
  - c. Discuss the following
    - i. Cross Talk
    - ii. Jitter
    - iii. Impulse Noise
  
3.
  - a. Itemise the advantages and disadvantages of Local Area Networks
  - b. Discuss any three Computer Networks topological arrangements
  - c. In a tabular form, give a summary of Ethernet Standards