UNIVERSITY OF GHANA

DEPARTMENT OF TEACHER EDUCATION

SCHOOL OF EDUCATION AND LEADERSHIP

COLLEGES OF EDUCATION

END OF YEAR TWO SEMESTER TWO EXAMINATIONS, 2022/2023

B.ED. PROGRAMME

CODE: TEJS 206

COURSE TITLE: Data communication &Networking

Instruction: Answer __all__ questions in Section A and any __three__ in Section B.

Time: 2 hours

SECTION A

1. Raw facts or figures are known as _____
A. information
B. Data
C. Entity
D. Communication

2. Communication which occurs face-to-face is referred to as _____
A. Local
B. Telephony
C. Remote
D. Telegraph

3. Data can be transmitted between two devices by means of cable and _____
A. Telegraph
B. Telephony
C. Bluetooth
D. Wireless

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4. Data communication systems are made up of software and _____

A. Files

B. Hardware

C. Cables

D. Data

5. Data is represented in the following forms EXCEPT _____

A. Text

B. Numbers

C. Images

D. Protocol

6. The following are analogue devices EXCEPT _____

A. MP 3 player

B. Microphone

C. Loud speaker

D. keyboard

7. What is the primary purpose of the Domain Name System (DNS) in networking?

A. To encrypt data during transmission

B. To assign IP addresses to devices

C. To compress data for faster transfer

D. To provide physical connectivity between devices

8. What does TCP/IP stand for in the context of networking?

A. Total Control/Internal Processing

B. Transmission Control Protocol/Internet Protocol

C. Time Configuration/Internal Processing

D. Topology Control/Internet Processing

9. A signal that has lost its strength can be rejuvenated by_____

A. Magnification

B. Amplification

C. Magnetization

D. Attenuation

10. The acronym HTTPS stands for _____

A. Hypertext transmission portfolio systems

B. Hypertext transfer protocol security

C. Hypertext transmission protocol security

D. Hypertext transfer portfolio system

11._____ is the amount of data transmitted in a specific time period over a network.
A. Bandwidth
B. Data Rate
C. Error rate
D. Frame rate

12 What does LAN stand for in networking?
A. Local Area Network
B. Longitudinal Access Node
C. Link Aggregation Network
D. Logical Area Network

13. What is the primary purpose of a router in a computer network?
A. Connect devices within the same network
B. Connect different networks and direct data between them
C. Filter and block incoming network traffic
D. Provide wireless connectivity to devices

14. Which of the following is not a criterion for measuring computer networks?
A. Performance
B. Reliability
C. Jitter
D. Security

15. Which protocol is commonly used for sending and receiving emails?
A. FTP
B. SMTP
C. HTTP
D. DHCP

16. What is the purpose of a firewall in a network?
A. To amplify network signals
B. To secure a network by controlling incoming and outgoing traffic
C. To connect devices within a short range
D. To convert digital signals to analog signals

17. Microwaves are used for the following EXCEPT _____
A. Cellular phone
B. Satellite
C. Wired LAN
D. Wireless LAN

18._____ are the interconnection of a set of devices capable of communicatio
A. Routers
B. Satellite
C. Computers
D. Networks

19._____ are an example of connecting devices.
   A. Bus
   B. Mobile phones
   C. Computers
   D. Topologies

20. Which of the following is a protocol used for secure communication over a computer network?
   A. HTTP
   B. FTP
   C. HTTPS
   D. SMTP

21. The way in which a network is laid out physically is called_____
   A. Network topology
   B. Network layer
   C. Network TCP/IP
   D. Network bus

22. Electronic device that receives a network signal, cleans it of unnecessary noise and regenerates it is called _____
   A. Gatway
   B. Bridge
   C. Modem
   D. Repeater

23. _____ is a central network device that connects workstations and servers in a star topology.
   A. Hotspot
   B. Hub
   C. Modem
   D. Access point

24. _____ is made of glass or plastic and transmits signals in the form of light?

   A. Coaxial cable
   B. Fibre-optics
   C. Modems
   D. Twisted pair

25. Which type of wireless technology is implemented in a television and a remote-control communication?
   A. Radio waves
   B. Infra-red
   C. Microwaves
   D. Bluetooth

SECTION B

Answer three (3) questions from this section

1.a. What is data communication?   5marks

b. Explain these Key Components of Data Communication.   15 marks

- Message
- Sender
- Receiver
- Medium/channel
- Protocol

c. Differentiate between analogue and digital signal.   5 marks

2. a. What is the role of routers in data communication networks?
b. How does encryption contribute to secure data communication?
c. Describe three (3) types of transmission impairment?   15marks

3. What is a network device?   5 marks

b. Describe three (3) networking devices?   15marks.
c. Differentiate between a shielded twisted and unshielded twisted pair cables   5marks

4a. What is HTML?   5 marks
b. Write HTML code to define the basic structure of a web page?   10 marks
c. With the aid of a diagram, explain the mesh topology?   10 marks