1) What are interconnected computing devices that can exchange data and share resources with each other?

a) Servers

b) Computer Network

c) Web

d) Packet Switching

2) True or False: Network devices use a system of rules, called communications protocols.

3) What transmits information over physical or wireless technologies?

a) Servers

b) Internet

c) Network devices

d) Hosts

4) What includes hosts, access network, physical media?

a) Network Edge

b) Network Core

c) Performance

d) Layers

5) What involves packet/circuit switching and internet structure?

a) Network Edge

b) Network Core

c) Performance

d) Layers

6) What are examples of network performance metrics?

a) Loss

b) Delay

c) Throughput

7) Billions of connected computing devices like PC, server, wireless laptop, smartphone are examples of:

a) Servers

b) Internet

c) Network devices

d) Hosts

8) True or False: Devices like PC, server, wireless laptop, smartphone are part of a computer network.

9) What is equivalent to "End systems" in the context of servers, internet, hosts, and edges?

a) Servers

b) Internet

c) Hosts

d) Edges

10) In the internet, running network apps occurs at the:

a) Edge

b) Server

c) Host

d) Layer

11) What forwards packets, which are "chunks of data" in communication links?

a) Packet Switching

b) Server

c) Browser

d) Communication Link

12) True or False: Packet switching involves routers and switches.

13) True or False: Communication links can be fiber, copper, radio, and satellite.

14) What is the transmission rate associated with Packet Switching?

a) Bandwidth

b) Fiber

c) Router

15) True or False: Hosts represent a collection of devices, routers, and links managed by an organization.

16) What is the internet according to the statement "Internet is 'network of networks'"?

a) A Component View

b) A Service View

c) Standard View

d) All of them

17) True or False: The Internet is interconnected ISPs.

18) True or False: Edges control the sending and receiving of messages in protocols.

19) Examples of what include HTTP (Web), streaming video, Skype, TCP, IP, WiFi, 4G, Ethernet?

a) Protocols

b) Servers

c) Hosts

d) Edges

20) What are internet standards: RFC, IETF, FCE, A&B only?

21) True or False: RFC stands for "Request for Comments."

22) True or False: IETF is the standard of the Internet Engineering Task Force.

23) What is Protocols in terms of Software, Hardware, Hardware + Software, Software + Hardware?

a) S/W

b) H/W

c) H/W + S/W

d) S/H

24) What do hosts, communication links, and packet switches represent in terms of Software, Hardware, Hardware + Software, Software + Hardware?

a) S/W

b) H/W

c) H/W + S/W

d) S/H

25) What does the internet represent in terms of Software, Hardware, Hardware + Software, Software + Hardware?

a) S/W

b) H/W

c) H/W + S/W

d) S/H

26) What does the internet provide in terms of infrastructure and services to applications?

a) A Component View

b) A Service View

c) Standard View

d) All of them

27) Examples of applications with servers include:

a) Web

b) Streaming video

c) Multimedia teleconferencing

d) All of the above

28) From which view does the internet provide a programming interface to distributed applications?

a) A Component View

b) A Service View

c) Standard View

d) All of them

29) What allows sending/receiving apps to "connect" to and use Internet transport service?

a) Hosts

b) Hooks

c) Servers

d) Hardware

30) True or False: The internet provides service options analogous to the postal service.

31) **Missing question**

32) What defines the format, order of messages sent and received among network entities, and actions taken on message transmission, receipt?

a) Hosts

b) Servers

c) Software

d) Protocols

33) True or False: Hosts include clients and servers.

34) True or False: Servers are often located in data centers.

35) True or False: Access networks and physical media include wired and wireless communication links.

36) What represents interconnected routers and a network of networks?

a) Network Core

b) Network Edge

c) Access Networks

d) Physical Media

37) What involves different channels transmitted in different frequency bands?

a) FDM

b) SDM

c) ADM

d) TDM

38) True or False: FDM is the standard for frequency division multiplexing.

39) True or False: HFC is the standard for hybrid fiber coax.

40) What represents asymmetric downstream and upstream transmission rates for cable, fiber, radio, and satellite?

a) Fiber (HFC)

b) Copper

c) Radio

d) Satellite

41) True or False: A network of cable and fiber attaches homes to ISP Switch, and homes share access network to the cable headend.

42) True or False: DSL is the standard for digital subscriber line.

43) What uses existing telephone lines to a central office DSLAM?

a) DSL

b) FDM

c) HFC

d) All of these

44) Data over DSL phone line goes to:

a) Internet

b) Telephone Network

c) ISP Switch

d) All of these

45) Voice over DSL phone line goes to:

a) Internet

b) Telephone Network

c) ISP Switch

d) All of these

46) What is the dedicated upstream transmission rate for DSL?

a) 24-52 Mbps

b) 3.5-16 Mbps

c) 40 Mbps – 1.2 Gbps

d) 30-100 Mbps

47) What is the dedicated downstream transmission rate for DSL?

a) 24-52 Mbps

b) 3.5-16 Mbps

c) 40 Mbps – 1.2 Gbps

d) 30-100 Mbps

48) Shared wireless access network connects end systems to:

a) Digital Subscriber Line

b) Home Networks

c) Mobile Networks

d) All of these

49) Via what is a base station also known as an "access point"?

a) Digital Subscriber Line

b) Home Networks

c) Mobile Networks

d) All of these

50) Within or around a building (~100 ft), 802.11b/g/n (WiFi) has a transmission rate of:

a) 11 Mbps

b) 54 Mbps

c) 450 Mbps

51) Provided by a mobile, cellular network operator over a distance of 10's km with a transmission rate in the 10's Mbps range describes:

a) WLAN

b) WAN

c) LAN

d) MAN

52) In a network connecting switches and routers, what is the mix of wired and wireless link technologies used by companies and universities?

a) Digital Subscriber Line

b) Home networks

c) Mobile networks

d) Enterprise Networks

53) What are the possible transmission rates for wired access involving (Ethernet, Wifi, Hotspot, mobile)?

a) 100 Mbps

b) 1 Gbps

c) 10 Gbps

54) What are the transmission rates for wireless access points involving (Ethernet, Wifi, Hotspot, mobile)?

a) 11 Mbps

b) 54 Mbps

c) 450 Mbps

55) What type of high-bandwidth links connect hundreds to thousands of servers together and to the Internet in (digital subscriber line, Home networks, Mobile networks, data center networks)?

a) 10s Gbps

b) 100s Gbps

56) In host sending function, what are application messages broken into?

a) Packets

b) Messages

c) Bits

d) Bandwidth

57) What does (Host – Servers - Software – Protocols) do with the transmitted packet in the access network?

a) Transmits

b) Receives

c) Processes

58) What is the (Host – Servers - Software – Protocols) link transmission rate also known as?

a) Link capacity

b) Link bandwidth

59) What comprises Simple Point-to-Point Ethernet Networks?

a) Physical media

b) Internet

c) Protocols

d) Servers

60) True or False: Networks are comprised of at least two end stations and a medium over which data can be carried.

61) What lies between the transmitter and receiver in (Physical link – Guided media - unguided media - Bit)?

a) Physical link

b) Guided media

c) Unguided media

d) Bit

62) What propagates between transmitter/receiver pairs in (Physical link – Guided media - unguided media - Bit)?

a) Physical link

b) Guided media

c) Unguided media

d) Bit

65) What is the primary physical medium used in enterprise networks among (Twisted pair (TP), Fiber, Satellite, All of these)?

a) Twisted pair (TP)

b) Fiber

66) What is copper coaxial cabling commonly used for in (Twisted pair (TP), Fiber, Coaxial cable, All of these)?

a) Shared network support

67) What are the characteristics of two concentric copper conductors in (Twisted pair (TP), Fiber, Coaxial cable, All of these)?

a) Bidirectional

b) Broadband

c) Multiple frequency channels

d) 10’s Mbps per channel

68) What does the glass fiber in (Twisted pair (TP), Fiber Optic, Coaxial cable, All of these) carry for high-speed point-to-point transmission?

a) Light pulses

b) Electrical signals

c) Radio waves

d) Data packets