

- 1) You have been asked to wire a conference room with six computers for a demonstration. It needs to be done as quickly and with lowest possible expense. What network topology is best suited in this situation?
  - a) Star
  - b) Ring
  - c) Mesh
  - d) Bus
- 2) At which layer of OSI model would a communication problem due to an improperly terminated cable reside?
  - a) Physical
  - b) Data Link
  - c) Transport
  - d) Session
- 3) What is the period of a signal
  - a) Number of periods per second
  - b) the amount of time a signal takes to complete one cycle
  - c) the distance one bit occupies on a transmission medium
  - d) the range of frequencies in a composite signal
- 4) Which of the following layer is responsible for the source to destination delivery of entire message?
  - a) Physical
  - b) Data Link
  - c) Transport
  - d) Network
- 5) Which layer deals with
  - i) File system Transfer: \_\_\_\_\_
  - ii) Oversees both error control & flow control
  - iii) Data Translation
  - a) Application, Data Link, Presentation
  - b) Application, Transport, Presentation
  - c) Application, Transport, Session
  - d) Application, Data Link, Session
- 6) Match List-I with List-II and select the correct answer using the codes given below:

List-I	List-II
<b>A. Repeaters</b>	1. Data Link Layer
<b>B. Bridges</b>	2. Network Layer
<b>C. Routers</b>	3. Physical Layer

	A	B	C
a	2	3	1
b	3	1	2
c	3	2	1
d	2	1	3

- 7) In a mesh topology with N devices, if a new device is added, how many new links are added
  - a) N-1
  - b) N
  - c) N+1
  - d) 2N
- 8) The header added by the transport layer to the packet coming from the upper layer includes the
  - a) Logical Address
  - b) Physical Address
  - c) Service-point Address
  - d) Network Address

- 9) \_\_\_\_\_ addresses on headers change as a packet moves from network to network but the \_\_\_\_\_ do not
- a) Logical, port
  - b) Logical, physical
  - c) Logical, network
  - d) Physical, logical
- 10) A constellation diagram shows us the \_\_\_\_\_ of a signal element, particularly when we are using two carriers (one in-phase and one quadrature).
- a) phase and frequency
  - b) amplitude and phase
  - c) frequency and amplitude
  - d) none of the above
- 11) IP is responsible for \_\_\_\_\_ communication while TCP is responsible for \_\_\_\_\_ communication
- a) Host-to-host, process-to-process
  - b) Process-to-process, host-to-host
  - c) Process-to-Process, Node-to-Node
  - d) Node-to-Node, Process-to-Process
- 12) A host can be identified by \_\_\_\_\_ while a program on the host can be identified by \_\_\_\_\_.
- a) An IP address, a port number
  - b) A port address, an IP address
  - c) An IP Address, a host address
  - d) An IP address, a well known port
- 13) The constellation diagram of BPSK has \_\_\_\_\_ dots.
- a) 3
  - b) 1
  - c) 2
  - d) 4
- 14) The network that you support includes 14 separate offices nation wide connected via T-1 lines. What kind of network do you have?
- a) Campus Area Network
  - b) LAN
  - c) MAN
  - d) WAN
- 15) Which of the following is incorrect regarding TCP and UDP protocols?
- a) UDP is connectionless end to end protocol
  - b) TCP is connection-oriented end to end protocol
  - c) TCP is connectionless and end to end protocol
  - d) Both TCP and UDP use IP for packet delivery
- 16) Given statement is true or false: The Shannon capacity gives us the lower limit; the Nyquist formula tells us how many signal levels we need.
- a) True
  - b) False

17) Which of the following statements are true about Quantization and sampling

i. According to the Nyquist theorem, the sampling rate must be at least 4 times the highest frequency contained in the signal

ii. Sampling results in a series of pulses of varying amplitude values ranging between two limits: a min and a max.

iii. When a signal is quantized, we introduce an error - the coded signal is an approximation of the actual amplitude value.

iv. Signals with lower amplitude values will suffer more from quantization error

a) i,ii and iii

b) ii,iii and iv

c) i,iii and iv,

d) i, ii, iii and iv

18) A periodic cycle completes one cycle in 0.001s what is the frequency

a)1Hz

b)100Hz

c)1KHz

d)1MHz

19) Which of the following unguided media needs omni-directional antenna for communication?

a) Microwave

b) Radiowave

c) Infrared Wave

d) High Frequency wave

20) In \_\_\_\_\_ transmission, the carrier signal is modulated so that its amplitude varies with the changing amplitudes of the modulating signal.

a)AM

b)FM

c)PM

d)None

21) In which of the following channels, we cannot send a digital signal directly to the channel.

a) lowpass

b) bandpass

c) low rate

d) high rate

22) In QAM, both \_\_\_\_\_ of a carrier frequency are varied.

(a) frequency and amplitude

(b) phase and frequency

(c) amplitude and phase

(d) none of the above

23) We want to digitize the human voice. What is the bit rate, assuming 8 bits per sample?

A) 64 kbps                  B) 54 kbps                  C) 74 kbps                  D) 44 kbps

- ## Answers

[illegible]