

## MCOM UNIT 1 :

1. Time synchronization is necessary in

A FDM  
B. TDM  
C. WDM  
D. Quadrature multiplexing

ANSWER: B

2. The larger the Grade of Service, the worse is the service given

A True  
B.false

ANSWER:A

3. Type of scaling that have same circuit and is used for both signaling and voice communication is called

A. out-band  
B. in-tand  
C. signal transport port  
D. Signal point

ANSWER B

4. Three methods of switching are

A circuit switching packet switching, and protocol switching  
B circuit switching packet switching, and message switching  
C. Loop switching packet switching, and message switching  
D. Node switching, packet switching, and message switching

ANSWER:B

5. Common channel signaling

- A Uses the speech or data path for signaling
- B. Does not use the speech or data path for signaling
- C. Needs no additional transmission facilities
- D. Finds it difficult to handle signaling during speech

ANSWER: C

6. Which forms of grading design has/have the tendency to share every trunk between

- A. Homogeneous Grading
- B. Heterogeneous Grading
- C. Skipped Grading D. All of the above

ANSWER: A

7. In multiplexed space switching system one speech sample appears every

- A. 425 micro sec
- B 20 msec
- C. 125 msec
- D 1 sec

8. Engaged tone is generated in the

- A Telephone Instrument of calling subscriber
- B. Repeater
- C. Exchange
- D. Telephone instrument of called subscriber

ANSWER: C

9. An off-hook signal will repeat for

- A finite
- B. infinite
- C. duration of 40 seconds
- D. duration of 84 seconds

ANSWER: A

10. In a DTMF phone a dialling of generates

- A. 1336 Hz-770 Hz
- B. 1209 Hz- 941 Hz
- C. 1209 Hz- 1477 Hz
- D. 1336 Hz-852 Hz

ANSWER: A

11. The CCITT standard bandwidth for speech is

- A. 20000 Hz
- B. 15000Hz
- C. 7000Hz
- D. 3400Hz

Answer : D

12. Who developed the fundamental of trunking theory?

- A Newton
- B. Ohm
- C. Erlang
- D. Einstein

ANSWER:C

13. What is the unit for the measure of traffic intensity?

- A Meters

B. Henry

C. Ohm

D. Erlang

ANSWER D

14. One Erlang represents

A. One call-hour per hour

B. One call-minute per hour

C. One call- hour per minute

D. Many calls-hour per hour

ANSWER: A

15. In signalling, a portion of the bandwidth is used for

A mixed

B. in-band

C out-of-band

D none of the above

ANSWER: B

16. Circuit Switching takes

A data line

B physical

C. network

D. transport

ANSWER B

17. Trunks are the lines that run between

A switching system and power plant

B. Local area network

- C. Switching stations
- D. Subscribers and exchange

ANSWER: C

18. Which kind of switching technique indicates the transfer of coded values from input to output

- A Space Switching
- B. Time Switching
- C. Combination Switching
- D. None the above

ANSWER: A

19. The ratio of number of successful calls to the number of call attempt is knowns

- A Call Completion Rate (CCR)
- B. Call Block Rate (CBRY
- C. Busy Hour Call Rate WACR)
- D. Name afte above

ANSWER: A

20. The      is a circuit switched network, while the      is a packet-switched network

- A. telephone, ATM
- B. SONET and FDD
- C. satellite, telephone
- D. FDDI and SONET

ANSWER: A

21. When a switch capacity is full, calls coming into that switch are said to be

- A. open
- B. short
- C. blocked

D shunted

ANSWER: blocked

22. Example circuit switching and S&F stored and Forward switching

A. Telephone Post or Telegraph

B. Video Signal Post or Telegraph

C. Dual Band Post or Telegraph

ANSWER: A

23. In each packet is treated independently of all others

A circuit switching

B. datagram switching

c. frame switching none

ANSWER B

24. In message switching system, an incoming message gets \_\_\_\_\_ especially if the required route is busy

A. Lost

B. Stored in a queue & retransmitted

C. Sampled

D. Recovered

ANSWER: B

25. Which type of switching network involves the establishment of a dedicated path between two stations

A Message Switching

B. Packet Switching

C Circuit Switching

D. Manual Switching

ANSWER: C

26. If a group of trunk is offered 1200 calls during the busy hour & 20 calls are lost along with the average call duration of 1 min, then what would be the total duration of congestion period?

A 21.6 sec

B 1422 sec

C. 57.6 sec

D. 982 sec

ANSWER:C

27. In two-stage network, which phenomenon situation occurs due to impossible connectivity of given incoming trunk to outgoing trunk specifically because of link utilization for other connection between primary and secondary switches

A Bursting

B Blinking

C. Blocking

D. Burning

ANSWER: C

28. By how many times does the time division change exhibit connection and disconnection with time to its ability of using rearrangeable networks?

A 2

B. 4

C. 8

D. 16

ANSWER C

29. Which among the following can be adopted a dedicated path between the source and destination in

A. Physical Wire

B. Radio Link

C. CO-Axial Cable

D. All of the above

ANSWER D

30. Consider the statements given below. Which among them represents the operational step executed in datagram packet switched Network?

- A. Fixed Path is assigned between nodes from source to destination
- B. First Come First Served basis is applicable
- C. Necessity of an identifier for a connection between source host & destination host
- D. Transmission of short messages of one or two packet

ANSWER D

31. A time division time switch can be controlled in

- A Sequential write random read
- B. random write random read
- C. random read sequential
- D. All of above

ANSWER:D

32. the one stage space division switch. IN-100. the number of

- A. 10,000
- B. 20,000
- C. 40,000
- D. 30,000

ANSWER:

33. In DTMF tone the frequency used

- A. 697/1209 Hz
- B 900/1400 Hz
- c. 10/100 Hz
- D. 2201477Hz.

ANSWER A



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1. What is the concept for accommodating a large number of users in a limited radio spectrum?
    - a) Grade of service
    - b) **Trunking**
    - c) Multiplexing
    - d) Multitasking
  
  2. On termination of call, the occupied channel is not returned to the pool of available channels in trunking.
    - a) True
    - b) **False**
  
  3. In trunking system, when the channel is already in use, the call is blocked or queued.
    - a) **True**
    - b) False
  
  4. Who developed the fundamental of trunking theory?
    - a) Newton
    - b) Ohm
    - c) **Erlang**
    - d) Einstein
  
  5. What is the unit for the measure of traffic intensity?
    - a) Meters
    - b) Henry
    - c) Ohm
    - d) **Erlang**
  
  6. What is the measure of the ability of user to access a trunked system during the busiest hour?
    - a) **Trunking**
    - b) Grade of Service (GOS)
    - c) Multiplexing
    - d) Sectoring

7. GOS is typically given as a likelihood that a \_\_\_\_\_
- a) Call is in progress
  - b) Channels are busy
  - c) **Call is blocked**
  - d) Channel are free
8. The time requires to allocate a trunked radio channel to a requesting user is called \_\_\_\_\_
- a) Dwell time
  - b) Holding time
  - c) Run time
  - d) **Set up Time**
9. Average duration of a typical call is called \_\_\_\_\_
- a) **Holding time**
  - b) Dwell time
  - c) Set up time
  - d) Run time
10. The average number of call requests per unit time is also known as \_\_\_\_\_
- a) **Request rate**
  - b) Load
  - c) Grade o Service
  - d) Traffic intensity
11. Traffic intensity offered by each user is the product of \_\_\_\_\_
- a) Set up time and holding time
  - b) **Call request rate and holding time**
  - c) Load and holding time
  - d) Call request rate and set up time
12. AMPS cellular system is designed for a GOS of \_\_\_\_ blocking.
- a) 10%
  - b) 50 %
  - c) **2%**
  - d) 1%
13. Blocked calls cleared formula is also known as \_\_\_\_\_ formula.
- a) Erlang C
  - b) Erlang A

- c) Erlang D
- d) Erlang B

14. Blocked calls delayed formula is also known as \_\_\_\_\_

- a) Erlang A
- b) Erlang B
- c) Erlang C
- d) Erlang D

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**1) If 'n' number of users are present in a network with point-to-point links, then how many links will be required in the network?**

- a.  $n(n - 1)$
- b.  $n(n - 1) / 2$
- c.  $n(n - 1) / 4$
- d.  $n(n - 1) / 8$

**ANSWER: (b)  $n(n - 1) / 2$**

**2) Which among the following is/are adopted by cross bar systems with hard wired control subsystem?**

- a. Relays
- b. Latches
- c. Both a and b
- d. None of the above

**ANSWER: (c) Both a and b**

**3) Which kind of switching technique indicates the transfer of coded values from input to output during the same interval of time?**

- a. Space Switching
- b. Time Switching
- c. Combination Switching
- d. None of the above

**ANSWER: (a) Space Switching**

**4) What is the hardware, used to establish connection as an electrical path between inlet and outlet pair in switching system, known as?**

- a. Switching Matrix
- b. Switching Network
- c. Both a and b
- d. None of the above

**ANSWER: (c) Both a and b**

**5) In folded type of network, \_\_\_\_**

- a. input lines are folded back to output lines
- b. output lines are folded back to input lines
- c. input lines are folded back to themselves (input lines)
- d. output lines are folded back to themselves (output lines)

**ANSWER: (b) output lines are folded back to input lines**

**6) The ratio of number of successful calls to the number of call attempts is known as \_\_\_\_**

- a. Call Completion Rate (CCR)
- b. Call Block Rate (CBR)
- c. Busy Hour Call Rate (BHCR)
- d. None of the above

**ANSWER: (a) Call Completion Rate (CCR)**

**7) If a telephone exchange serves 1500 users with the average BHCA of about 9000 and CCR is about 50%, what would be the busy hour calling rate?**

- a. 2
- b. 3
- c. 4.5
- d. 5

**ANSWER: (b) 3**

**8) How is the relation between Erlang and CCS specified?**

- a. 1 Erlang = 36 CCS
- b. 1 Erlang = 56 CCS
- c. 1 Erlang = 76 CCS
- d. 1 Erlang = 96 CCS

**ANSWER: (a) 1 Erlang = 36 CCS**

**9) Percentage of occupancy can be defined as the percentage of \_\_\_\_ for which the server seems to be busy.**

- a. speed
- b. distance

- c. time
- d. volume

**ANSWER: (c) time**

**10) By which name/s is the Grade of Service (GOS) well-known?**

- a. Call congestion
- b. Time congestion
- c. Both a and b
- d. None of the above

**ANSWER: (a) Call congestion**

**11) Which among the following provides TRG access to outgoing junctions through the two stage network?**

- a. Expander
- b. Distributor
- c. Concentrator
- d. Router

**ANSWER: (d) Router**

**12) Which shape of switches are not adopted normally due to non-usability of both way trunks?**

- a. Circular
- b. Triangular
- c. Hexagonal
- d. Square

**ANSWER: (b) Triangular**

**13) In graded groups, switches with inaccessibility to the outgoing route gets \_\_\_\_ into the number of separate groups.**

- a. added
- b. subtracted
- c. multiplied
- d. divided

**ANSWER: (c) multiplied**

**14) Which form/s of grading design has/have the tendency to share every trunk between equal number of groups?**

- a. Homogeneous Grading
- b. Heterogeneous Grading
- c. Skipped Grading
- d. All of the above

**ANSWER: (a) Homogeneous Grading**

**15) For the two-group grading consisting of 14 trunks, availability = 5,  $A_k = 1.4E$  and the required grade of service of about 0.01, what would be its traffic capacity?**

- a. 4.98 E**
- b. 6.72 E**
- c. 8.3 E**
- d. 10 E**

**ANSWER: (a) 4.98 E**

**16) Which among the following controls the dynamic characteristics of Phase Locked Loop (PLL)?**

- a. Low Pass Filter**
- b. High Pass Filter**
- c. Band Pass Filter**
- d. Band Stop Filter**

**ANSWER: (a) Low Pass Filter**

**17) After the application of line frequency in Phase Locked Loop (PLL), at which stage do/ does the VCO frequency start to exhibit variation?**

- a. Free running**
- b. Capture**
- c. Phase Lock**
- d. All of the above**

**ANSWER: (b) Capture**

**18) What is an acceptable value of dividing point between the wander and jitter?**

- a. 10 Hz**
- b. 20 Hz**
- c. 50 Hz**
- d. 200 Hz**

**ANSWER:(a) 10 Hz**

**19) If the voltage controlled by VCO exhibits variation at faster and rapid rate, then the instability of clock is known as \_\_\_\_\_**

- a. Clock wander**
- b. Clock jitter**

- c. Clock frequency
- d. Clock period

**ANSWER: (b) Clock jitter**

**20) Which theorem in random jitter specifies the composite effect of various uncorrelated noise sources despite the distribution approaches to Gaussian distribution?**

- a. Initial Value Theorem
- b. Final Value Theorem
- c. Central Limit Theorem
- d. None of the above

**ANSWER: (c) Central Limit Theorem**

**21) Which type of data network supports the interconnection of computers within highly populated area?**

- a. LAN
- b. WAN
- c. MAN
- d. None of the above

**ANSWER: (c) MAN**

**22) Which among the following is/are supported by LAN?**

- a. PABX
- b. PSTN
- c. SBDN
- d. All of the above

**ANSWER: (a) PABX**

**23) If the voice channel is free in PSTN, then what would be the maximum data rate supported by 3.1 kHz bandwidth of voice channel?**

- a. 2000 bps
- b. 4000 bps
- c. 6000 bps
- d. 8000 bps

**ANSWER: (c) 6000 bps**

**24) In Phase Shift Keying, how many bit/s is/are allowed to be transmitted per shift?**

- a. 1
- b. 2

- c. 4
- d. 8

**ANSWER: (b) 2**

**25) Which among the following utilizes the transmission line upto 85 – 95 %?**

- a. Voice Traffic
- b. Data Traffic
- c. Both a and b
- d. None of the above

**ANSWER: (a) Voice Traffic**

**26) If the system is designed with the usage of hexagonal-shaped cells, how are the base-stations located?**

- a. At the centre of cell
- b. At the edge of cell
- c. At the corner of the cell
- d. All of the above

**ANSWER: (d) All of the above**

**27) Which antennas are used at the center of the cells for the system with hexagonal-shaped cells?**

- a. Omni-directional antennas
- b. Sectorized directional antennas
- c. Both a and b
- d. None of the above

**ANSWER: (a) Omni-directional antennas**

**28) In a cellular telephone system, which type of interference results from imperfect design of filters in receivers by allowing nearby frequencies to enter the receiver?**

- a. Co-channel Interference
- b. Adjacent-channel Interference
- c. Both a and b
- d. None of the above

**ANSWER: (b) Adjacent-channel Interference**

**29) Which effect is widespread in adjacent-channel interference especially after the reception of a weak signal by a mobile user from the base-station?**



- a. Near-far effect
- b. Doppler's effect
- c. Capture effect
- d. Kendall effect

**ANSWER: (a) Near-far effect**

**30) Which method of cellular network assists in minimizing the co-channel interference associated with the angle of degree?**

- a. Cell Splitting
- b. Cell Sectoring
- c. Cell Segmentation & Dualization
- d. None of the above

**ANSWER: (b) Cell Sectoring**

**31) Which type of connection takes place between an incoming trunk and an outgoing trunk?**

- a. Local call
- b. Outgoing call
- c. Incoming call
- d. Transit call

**ANSWER: (d) Transit call**

**32) In message switching system, an incoming message gets \_\_\_\_ especially if the required route is busy.**

- a. lost
- b. stored in a queue & retransmitted
- c. sampled
- d. recovered

**ANSWER: (b) stored in a queue & retransmitted**

**33) Which type of switching network involves the establishment of a dedicated path between two stations?**

- a. Message Switching
- b. Packet Switching
- c. Circuit Switching
- d. Manual Switching

**ANSWER: (c) Circuit Switching**

**34) In packet switching, what does the header of each short size of packet consist of?**

- a. Source address
- b. Destination address
- c. Intermediate nodes
- d. All of the above

**ANSWER: (d) All of the above**

**35) In manual switching, which kind of battery exchange has the provision of subscribers set along with magneto generator?**

- a. Local battery exchange
- b. Central battery exchange
- c. Both a and b
- d. None of the above

**ANSWER: (a) Local battery exchange**

**36) If a group of trunk is offered 1200 calls during the busy hour & 20 calls are lost along with the average call duration of about 7 min, then what would be the total duration of congestion period?**

- a. 21.6 sec
- b. 42.2 sec
- c. 57.6 sec
- d. 98.2 sec

**ANSWER: (c) 57.6 sec**

**37) In analyzing the traffic performance, how is the number of trunk decided with the provision of the Grade of Service (GoS) especially for larger group?**

- a. By normal load condition
- b. By overload condition
- c. By underload condition
- d. None of the above

**ANSWER: (b) By overload condition**

**38) If the queuing systems are connected in tandem configuration, what would be the nature of delay?**

- a. Commutative
- b. Distributive
- c. Cumulative
- d. Deductive

**ANSWER: (c) Cumulative**

**39) Which type of holding time distribution is assumed for the voice conversation on telephone?**

- a. Constant
- b. Exponential
- c. Both a and b
- d. None of the above

**ANSWER: (b) Exponential**

**40) Which model of loss system allows the usage of Poisson distribution model for traffic analysis especially by assuming infinite number of users?**

- a. Lost Calls Cleared (LCC)
- b. Lost Calls Returned (LCR)
- c. Lost Calls Held (LCH)
- d. None of the above

**ANSWER: (a) Lost Calls Cleared (LCC)**

**41) In two-stage network, which phenomenon/situation occurs due to impossible connectivity of given incoming trunk to selected outgoing trunk specifically because of link utilization for other connection between primary and secondary switches?**

- a. Bursting
- b. Blinking
- c. Blocking
- d. Burning

**ANSWER: (c) Blocking**

**42) Which kind of switching system does not comprise any subscriber, concentrator or expander?**

- a. Crossbar
- b. Director Exchange
- c. Strowger
- d. Tandem

**ANSWER: (d) Tandem**

**43) By how many times does the time division exchange exhibit connection and disconnection with respect to every millisecond, due to its ability of using rearrangeable networks?**

- a. 2
- b. 4

- c. 8
- d. 16

**ANSWER: (c) 8**

**44) Which signals are regarded as call-progress signals as they are sent back to inform the caller about the progress of the call?**

- a. Address Signals
- b. Status Signals
- c. Call request Signals
- d. Answer Signals

**ANSWER: (b) Status Signals**

**45) Which among the following exhibit/s the necessity of trunks during the signaling mechanism?**

- a. Inchannel Signaling
- b. Common Channel Signaling
- c. Both a and b
- d. None of the above

**ANSWER: (a) Inchannel Signaling**

**46) Phase jitter is generated by an additive noise on a \_\_\_\_\_ sinusoidal wave.**

- a. continuous
- b. sampled
- c. discrete
- d. distorted

**ANSWER: (a) continuous**

**47) What is /are the purpose/s of pulse stuffing in an asynchronous multiplexing?**

- a. Removal of slips & the need for clock synchronization
- b. Usability of output channel with higher rate than input
- c. Creation of timing adjustments
- d. All of the above

**ANSWER: (d) All of the above**

**48) In digital network synchronization, which approach indicates the cost burden carrying of highly accurate and redundant timing sources by means of smaller switching nodes?**

- a. Packetization
- b. Master Slave Clocking

- c. Network Wide Pulse Stuffing
  - d. Plesiochronous Network
- ANSWER: (d) Plesiochronous Network**

**49) If the desired connection has a low completion probability, which type of flow control technique is used for eliminating the capture of common resources?**

- a. Trunk Directionalization
- b. Cancellation of Alternate Routing
- c. Code Blocking
- d. Centralized Connection Control

**ANSWER: (d) Centralized Connection Control**

**50) In network management, managing the rate at which the traffic enters a network is known as \_\_\_\_**

- a. Flow control
- b. Routing control
- c. Data control
- d. All of the above

**ANSWER: (a) Flow control**

**51) Which among the following can be adopted as a dedicated path between the source and destination in circuit switching?**

- a. Physical Wire
- b. Radio Link
- c. Co-axial Cable
- d. All of the above

**ANSWER: (d) All of the above**

**52) The transfer of user messages from node to another by means of store and forward switching network is known as \_\_\_\_**

- a. jitter
- b. scaling
- c. hop
- d. entity

**ANSWER: (c) hop**

**53) Consider the statements given below. Which among them represents the operational step executed in datagram Packet Switched Network?**

- a. Fixed Path is assigned between nodes from source to destination
- b. First Come First Served basis is applicable
- c. Necessity of an identifier for a connection between source host & destination host
- d. Transmission of short messages of one or two packet length

**ANSWER: (d) Transmission of short messages of one or two packet lengths**

**54) In Protocol Data Units (PDUs), where do/does the data get/s interchanged?**

- a. Between peer entities
- b. Between entities of neighboring layers
- c. Between 'N' & 'N+1' layers
- d. All of the above

**ANSWER: (a) Between peer entities**

**55) Which type of framing technique/s reduce/s the problem of synchronization of the receiver?**

- a. Character Count
- b. Character Stuffing
- c. Bit Stuffing
- d. All of the above

**ANSWER: (b) Character Stuffing**

**56) If more number of cells are necessary in the frequency reuse distance, then the segmentation & dualization techniques get**

- 
- a. united
  - b. divided
  - c. restricted
  - d. filtered

**ANSWER: (a) united**

**57) Which hand-off stage deals with the relinquishment of unnecessary frequency channels by keeping the availability for other mobile users?**

- a. Initialization
- b. Resource Reservation
- c. Call Execution
- d. Call Completion

**ANSWER: (d) Call Completion**

**58) Which among the following represents the flawless hand-off with no perceivable interruption of service?**

- a. Hard hand-off
- b. Soft hand-off
- c. Intracell hand-off
- d. Intercell hand-off

**ANSWER: (b) Soft hand-off**

**59) In cellular telephone network, which component controls the switching between public wireline telephone network and the base station of cells for supporting the different calls between landline to mobile, mobile to landline and mobile to mobile calls?**

- a. Electronic Switching Center (ESC)
- b. A Cell Controller
- c. Radio Transmitter & Receiver
- d. A common communication protocol

**ANSWER: (a) Electronic Switching Center (ESC)**

**60) In Electronic Switching Centre (ESC), the transmission rate of X.25 protocol is \_\_\_9.6 Kbps.**

- a. Less than
- b. Equal to
- c. Greater than
- d. None of the above

**ANSWER: (c) Greater than**

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**1) Which among the following can be adopted as a dedicated path between the source and destination in circuit switching?**

- a. Physical Wire
- b. Radio Link
- c. Co-axial Cable
- d. All of the above

Answer : all of the above

**2) In manual switching, which kind of battery exchange has the provision of subscribers set along with magneto generator?**

- a. Local battery exchange
- b. Central battery exchange
- c. Both a and b

**d. None of the above**

answer : (a) local battery exchange

**3) Which type of switching network involves the establishment of a dedicated path between two stations?**

**a. Message Switching**

**b. Packet Switching**

**c. Circuit Switching**

**d. Manual Switching**

answer: (c ) circuit switching

**4) In message switching system, an incoming message gets \_\_\_\_\_ especially if the required route is busy.**

**a. lost**

**b. stored in a queue & retransmitted**

**c. sampled**

**d. recovered**

answer: (B) stored in a queue and retransmitted

**5) In packet switching, what does the header of each short size of packet consist of?**

**a. Source address**

**b. Destination address**

**c. Intermediate nodes**

**d. All of the above**

answer: d all of the above

**6) Telephone Traffic is measured in**

(A) Seconds.

(B) Hours.

(C) Erlang

(D) Pulses per minute.

Answer c

**7) which model of loss system allows the usage of Poisson distribution model for traffic analysis especially by assuming infinite number of users?**

**a. Lost Calls Cleared (LCC)**

**b. Lost Calls Returned (LCR)**

**c. Lost Calls Held (LCH)**

**d. None of the above**

answer (a)

**8) What is the hardware, used to establish connection as an electrical path between inlet and outlet pair in switching system, known as?**

**a. Switching Matrix**

**b. Switching Network**

**c. Both a and b**

**d. None of the above**

answer: both a and b

**9) Busy hour traffic is the**

(A) maximum average simultaneous traffic.

(B) traffic during peak hour.

(C) traffic when all subscribers are engaged.



(D) the duration of maximum calls.

Ans: (B)

**10) In Electronic Switching Centre (ESC), the transmission rate of X.25 protocol is \_\_\_\_9.6 Kbps.**

*on 18 Nov 15*

- a. Less than
- b. Equal to
- c. Greater than
- d. None of the above

**answer: c**

**11) Which kind of switching system does not comprise any subscriber, concentrator or expander?**

- a. Crossbar
- b. Director Exchange
- c. Strowger
- d. Tandem

**answer: d**

**12) How is the relation between Erlang and CCS specified?**

- a. 1 Erlang = 36 CCS
- b. 1 Erlang = 56 CCS
- c. 1 Erlang = 76 CCS
- d. 1 Erlang = 96 CCS

**answer: a**

**13) in ----- each packet is treated independently of all others**

- a) circuit switching
- b) datagram switching
- c) frame switching
- d) none of the above

**answer: b**

**14) which shape of switches are not adopted normally due to non-usability of both way trunks**

- a) circular
- b) triangular
- c) hexagonal
- d) square

**answer: b**

**15) the situation when both the transmitter and receiver have to work in tandem is referred as**

- a) parallel
- b) serial
- c) synchronous
- d) asynchronous

**answer: c**

**16) the----- is a circuit switched network, while the ----- is a packet- switched network**

- a) telephone, ATM
- b) SONET and FDDI
- c) satellite, telephone
- d) FDDI and SONET

answer: a

**17) When a switch capacity is full, calls coming into that switch are said to be\_\_\_\_\_.**

- (A) open
- (B) shorted
- (C) blocked
- (D) shunted

Answer: (C )

**18) Busy hour traffic is the**

- (A) maximum average simultaneous traffic.
- (B) traffic during peak hour.
- (C) traffic when all subscribers are engaged.
- (D) the duration of maximum calls.

**Answer: (B)**

**19) Example of circuit switching and S&F (Stored and Forward) switching is**

- (A) Telephone and Post or Telegraph
- (B) Video Signal Post or Telegraph
- (C) Digital Signal Post or Telegraph
- (D) None of above

**Ans: (A)**

**20)Erlang is used to**

- (A) Measure busy period
- (B) Give total busy period in minutes
- (C) Measure average call rate
- (D) Indicate total call period

**Ans: (A)**