

UNIT 1

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

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- 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?

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- 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?

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- 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.

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- 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?

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- 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?

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- 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?

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- 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.

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- 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?

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- a. Crossbar

- b. Director Exchange
 - c. Strowger
 - d. Tandem
- answer: d

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

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- 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)

UNIT 2

1) 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

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

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

Answer: a

3) In a time multiplexed space switching system, one speech sample appears every

- (A) 125 micro sec
- (B) 20 msec
- (C) 125 msec
- (D) 1 sec

Answer: A

4) Time synchronization is necessary in

- (A) FDM.
- (B) TDM.
- (C) WDM.
- (D) Quadrature multiplexing

Answer: B

5) The grade of service is measured in

- (A) Percentage
- (B) Number
- (C) Fractional Number
- (D) Logarithmic Number

Answer: C

6) The CCITT standard bandwidth for speech is

- (A) 20000 Hz
- (B) 15000 Hz
- (C) 7000 Hz
- (D) 3400 Hz

Answer: D

7) In a single stage network

- (A) There is no redundancy
- (B) There is redundancy
- (C) Alternative cross points are available
- (D) Alternative paths are available

Answer: (B)

8) The larger the Grade of Service, the worse is the service given

- (a) true
- (b) false

Answer: a

9) what are the Methods to move data through a network of links and switches

- a) Packet switching
- b) Circuit switching
- c) Line switching
- d) Both a and b

Answer: d

10) In _____ resources are allocated on demand.

- a) Packet switching
- b) circuit switching
- c) line switching
- d) frequency switching

Answer: a

11) Type of signaling that have same circuit and is used for both signaling and voice communication is called

- A. out-band
- B. in-band
- C. signal transport ports
- D. signal points

Answer: B

12) Protocol that is used in signaling network is called

- A. signal transport ports
- B. signaling network
- C. Signaling System Seven
- D. service control point

Answer: C

13) In Signaling System Seven (SS7), transport layer of OSI model is equivalent to

- A. SCCP
- B. TUP
- C. TCAP
- D. ISUP

Answer: A

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

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

answer: A

15) If a subscriber needs to provide free connections for other subscribers, it can request the

- A. 800 service
- B. 900 service
- C. wide-area telephone service
- D. digital data service

Answer: A

16) Term that refers to switch does not keep information about connection state is

- A. connection setup
- B. connectionless
- C. switchless
- D. teardown

Answer: B

17) 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

18) The situation when both transmitter and receiver have to work in tandem is referred to as

- (A) Parallel
- (B) Serial
- (C) Synchronous
- (D) Asynchronous

Answer: C

19) 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

20) Which transmission mode is used for data communication along telephone lines?

- (A) Parallel
- (B) Serial
- (C) Synchronous
- (D) Asynchronous

Answer: (B)

UNIT 3

1) Which of the following is/are the main part(s) of basic cellular system

- A) A mobile Unit
- B) A cell Site
- C) A mobile Telephone Switching Office
- D) All of the above

ANSWER: D

2) State whether True or False

- i) The cells or subdivisions of a geographical area are always hexagonal
- ii) A land to Mobile call originates through the Telephone exchange

- A) True, False
- B) False, True
- C) False, False
- D) True, True

ANSWER: B

3) are typically characterized by very small cells, especially in densely populated areas

- A) 2G system.
- B) 3G system.
- C) 2.5G system.
- D) 3.5G system.

ANSWER: C

4) To prevent interference of adjacent cell signals, size of cell is

- A) Increased
- B) Decreased
- C) Optimized
- D) Minimized

ANSWER: C

5) Roaming is feature of

- A) Cellular Telephony
- B) Cellular Data
- C) Cellular Frames
- D) Cellular Signals

ANSWER: A

6) Area which is divided into small region of cells is called

- A) Cellular Service
- B) Cellular Data
- C) Cellular Signals
- D) Cellular Stations

ANSWER: A

7) Mobile Switching Center (MSC) seeks a new cell that can better accommodate communication, if strength of signals are

- A) Strong
- B) Low
- C) Diminishes
- D) High

ANSWER: C

8) In cellular telephony, each band is divided into

- A) 82 Channels
- B) 80 Channels
- C) 78 Channels
- D) 76 Channels

ANSWER: A

9) In cellular telephony, size of cell is not fixed, increased or decreased depending on population of

- A) Signals
- B) Area
- C) Data
- D) Stations

ANSWER: B

10) In cellular telephony, channels 1 to 7 of Interim Standard 95 (IS-95) forward transmission are used for

- A) gives information
- B) paging
- C) traffic control
- D) bit synchronization

ANSWER B

11) In cellular telephony, data rate of each reverse voice channel in Interim Standard 95 (IS-95) is

- A) 9.2 kbps
- B) 9.4 kbps
- C) 9.6 kbps
- D) 9.8 kbs

ANSWER: C

12) In cellular telephony, Interim Standard 95 (IS-95), forward channel is used technique of

- A) CDMA
- B) DSSS
- C) FHSS
- D) FDMA

ANSWER: A

13) In cellular telephony, MSS stands for

- A) Multi Stations
- B) Moving Stations
- C) Mobile Stations
- D) Module Stations

ANSWER: C

14) In cellular telephony, Electronic Serial Number (ESN) is unique for each

- A) Station
- B) Data
- C) Mobile
- D) Frame

ANSWER: A

15) 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

16) 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

17) 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

18) In cellular telephony, reverse channels of Interim Standard 95 (IS-95) use

- A) FDMA
- B) FHSS
- C) CDMA
- D) DSSS

ANSWER: D

19) The interference between the neighboring base stations is avoided by

- A) Assigning different group of channels
- B) using transmitters with different power level
- C) Using different antennas
- D) All of the above

ANSWER: A

20) Hexagon shape is used for radio coverage for a cell because

- A) It uses the maximum area for coverage
- B) Fewer number of cells are required
- C) It approximates circular radiation pattern
- D) All of the above

ANSWER: D