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Question Bank

Class: T.Y.B. Sc.CS

Semester: VI

Subject: Wireless sensors and Mobile Communication

- 1) The Challenges we faced in designing sensor network system and application include
- a) Limited hardware
 - b) Limited support for networking
 - c) Limited support for software development
 - d) All of above

- 2) Match List 1 with List 2

List 1

1. Environmental Monitoring
2. Industrial Sensing
3. Infrastructure
4. Battlefield

List 2

- a. Responsive environment
- b. Multi target tracking
- c. power grids Protection
- d. Traffic, security Awareness

Options:

- I) (1)-(d) (2)-(e) (3)-(c) (4)-(b)
- II.) (1)-(a) (2)-(b) (3)-(c) (4)-(d)
- III.) (1)-(b) (2)-(a) (3)-(d) (4)-(c)
- IV.) (1)-(c) (2)-(b) (3)-(a) (4)-(d)

- 3) Which of the following questions are/is true?

P: TCP groups a number of bytes together into a packet called packet

Q: TCP groups a number of bytes together into a packet called segment

Select the correct answers given below

- a) Both P and Q
 - b) Only P
 - c) Only Q
 - d) Neither P nor Q
- 4) Which of the following condition is satisfied for below statement: Challenges and Issue Designing a Sensor Network
- a) It must be infrastructure-less
 - b) It must be adaptive to frequent topology
 - c) It must be loop free
- 5) What are the most important design aspects of TinyOS?
- a) Component based system
 - b) Component interact by exchanging asynchronous events
 - c) Components form a program by wiring them together
 - d) All the above
- 6) In a typical sensor network ,each sensor node operates untethered and has a microprocessor and a small amount of memory for signal processing and task scheduling.
- a) True
 - b) False
- 7) Which of the following issues we face in designing a Wireless Sensor Network?
- a) Maintenance and setup of the network should be autonomous.
 - b) Limited resources like memory, computation,power.
 - c) Sensor not should be able to adapt change in connectivity
 - d) All of the above
- 8) In _____ , each mobile node is an independent node, which act as a host and a router.
- a) Wireless Sensor Network
 - b) Mobile Ad-hoc Network
 - c) Both a and b

9) Multihop network operates on _____ principle.

- a) store packet
- b) forward packet
- c) store and forward packet
- d) receive and update packet

10) Which of the following is a data gathering protocol which is based on the assumption that all nodes know the location of each other node?

- a) Low Energy Adaptive Clustering Hierarchy
- b) Power Efficient Gathering for Sensor Information System
- c) Sensor Protocols for Information via Negotiation.
- d) Flooding and Gossiping

11) Match List-I and List-II:

List-I

List-II

a] Transceivers

1] central processing unit of node

b] Wireless Sensor Network

2] combination of transmitter and receiver

c] Controller

3] is the capability of network to maintain performance characteristics

d] Scalability

4] collection of sensor nodes which are homogeneous and self organized

Options:

I) a] - 2], b] - 4] ,c] - 1] ,d] - 3]

II) a] - 3] ,b] - 2] , c] - 4] ,d] - 1]

III) a] - 1] ,b] - 2] , c] - 3] ,d] - 4]

IV). a] - 4] ,b] - 1] , c] - 2] ,d] - 3]

- 12) Garuda comes under the downstream reliability group based on a _____ architecture.
- one tier
 - two tier
 - three tier
 - None of the above
- 13) MANET routing protocols are categorized into the following types:
- Topology based routing and Location based routing
 - Location based, Energy awareness based and Topology based routing
 - Topology based and Energy based routing
 - Location based and Energy awareness based routing
- 14) In a sensor node architecture, _____ is used a power saving polic to its ability to conserve power by shutting down parts of the network which not currently active or in usage. Which of the following substitutes the blank?
- Dynamic Voltage Scaling
 - Auto Power save mode
 - Critical Usage algorithm
 - Dynamic Power Management
- 15) Which of the following is one of the major challenges of WSN, similar to a DOS attack, which also creates illegal identities in a bid to break down the one to one mapping between each node?
- Sinkhole attack
 - Sybil attack
 - Clone attack
 - Selective forwarding attack

16) Match List-I with List-II

The advantages of WSN:

LIST- I

- 1) Robust
- 2) Reliable
- 3) Accurate
- 4) Fault-tolerant

LIST - II

- i) many nodes are sensing the same event
- ii) large number of sensors
- iii) degree of availability
- iv) sensor nodes covering wider range

Options

- a) 1-iii, 2-iv, 3-i, 4-ii
- b) 1- ii, 2-iii, 3-iv, 4-i
- c) 1-iv, 2-iii, 3-i, 4-ii
- d) 1-i, 2-ii, 3-iii, 4-iv

17) The advantages of multiplexing in WSNs are:

- i) Improving network capacity
- ii) Enhancing the connectivity
- iii) Added delays in switching ports
- iv) Reducing communication cost
- v) Interference between nodes

Options

- a) ii and iii
- b) v and i
- c) i, iii and iv
- d) i, ii and iv

18) Complete the table related to types of reliability in WSN

TYPE

FUNCTION

?

Communication between sink and remote host

Point to multipoint

?

?

Communication between sink and multiple wireless sensors

Options

- a) Communication between sink and sensor nodes, multipoint to point, point to point
- b) Point to point, communication between sink and sensor nodes, multipoint to point
- c) Single point to last point, communication among all nodes, multipoint to point
- d) None of the above

19) . A desirable modulation scheme provides _____ bit error rates at _____ received signal to noise ratios.

- a) Low, low
- b) Low, high
- c) High, high
- d) High, low

20) Match the Following

List I

- 1) Data Storage
- 2) Embedded os:
- 3) System performance

List II

- a): the abstract characterization of system properties
- b): a measurable quantity that describes how well the system is performing on some absolute scale.
- c): Sensor information is stored indexed and accessed by Goal: application.

4) Evaluation metric: d): the run-time system support for sensor network Applications. .

Options

- 1) 1-a 2-b 3-d 4-c
- 2) 1-c 2-d 3-a 4-b
- 3) 1-b 2-c 3-d 4-a
- 4) None of the Above

21) The DoD model (also called the TCP/IP stack) has four layers. Which layer of the DoD model is equivalent to the Network layer of the OSI model?

- a) Application
- b) Host to Host
- c) Internet
- d) Network Acces

22) IEEE 802.11 defines basic service set as building block of a wireless _____ a) LAN

- b) WAN protocol
- c) MAN
- d) ALOHA

23) Packet switching breaks each message into smaller units.

- a) True
- b) False

24) A Sensor network is designed to perform a set of high level information processing task such as

- a) Detection
- b) Tracking
- c) Classification
- d) All of the Above

25) Because of the unique attenuation characteristics of RF signals _____ network provide a significant energy saving over _____ network for the same distance.

- a) Single hop/ Multi hop

b) Multihop/ Single hop

c) None of the above

26) It is more appropriate to address nodes in a sensor network by _____ than by _____

a) Physical Address /IP Address

b) IP Address/ Physical properties.

c)Both a and b

d) None of the above

27) In a typical sensor network, which of the following statements is/are true?

a) Each sensor node has a microprocessor and a small amount of memory for signal processing and task scheduling.

b) Each node is equipped with one or more sensing devices such as acoustic microphone arrays, seismic or magnetic sensors.

Select the correct answer from the options given below :

1) Both a and b

2) Neither a nor b

3). Only a

4). Only b 42

28) Match the following List-1 with List-2:

List-1

List-2

a) Sensor

1.A connectivity graph where nodes are sensor nodes and edges are communication links.

b) Sensor Node

2.A transducer that converts a physical \ phenomenon that may be further manipulated by other apparatus.

c) Routing

3.A basic unit with on-board sensors, processor,wireless modern and power supply.

d) Network topology

4. A network path from a source to Its
Destinations.

Choose the correct option from those given below:

1. (a)-(4);(b)-(2);(c)-(1);(d)-(3)

2. (a)-(1);(b)-(4);(c)-(3);(d)-(2)

3. (a)-(3);(b)-(1);(c)-(2);(d)-(4)

4. (a)-(2);(b)-(3);(c)-(4);(d)-(1)

29) While designing new routing protocols, _____ and _____ should be fulfilled by a network engineer.

a) Node centric, Data centric

b) Energy efficiency, Complexity

c). Dynamic source routing, Proactive protocols

d). Directed diffusion, Delay

30) Equalization techniques can be categorized into _____ and _____ Techniques.

a) Active, passive

b) Linear, non linear

c) Slow, fast

d) Direct, indirect

31) _____ nodes where the data should be delivered to.

a) Sources

b) Sinks

c) Functions

d) Events

32) _____ use to store programs and intermediate data.

a) Sensor

b) Controller

c) Memory

d) Actuator

33) A sensor network is designed to perform a set of high level information processing tasks such as:

- a) Detection
- b) Tracking
- c) Classification
- d) All of the above

34) TinyOs supports ----- and ----- by the concept of components.

- a] mobility and data-based programming
- b] modularity and event-based programming
- c] mobility and event-based programming

35) What is the type of network in which the topology change from time to time?

- a) Wi-Fi
- b) Cell Network
- c) LAN
- d) MANET

36) What is the routing algorithm used in MANETs?

- a) Shortest Path First
- b) Routing Information Protocol
- c) Distance Vector Protocol
- d) Ad hoc On -demand Distance Vector Protocol

37) Match List:1 with List:2 Features of Manet

List:1.

- A) Rate of Failure
- B) Communication Mode.
- C) Identifiers.
- D) Aggregation.

List:2

- 1) point to point
- 2)Very rare
- 3)Not Possible
- 4)Unique

Options:-

- a) A:2;B:1;C:4;D:3
- b) A:1;B:3;C:2;D:4
- c) A:2;B:4;C:1;D:3
- d) A:1;B:3;C:2;D:4

38) Which of the following statements is/are true?

- P) MANET is scalable as it accommodates additional nodes in the network.
- Q) MANET is less expensive as compared to wired network
- R) MANET can define physical boundary of the network

Select the correct answer

- a) P and Q only
- b) P and R only
- c) Q and R only All of P,Q and R
- d) All of P,Q,R

39) A _____ is a collection of mobile nodes which are independent.

- a) WSN
- b) Ad-hoc
- c) MANET
- d) Non of the above

40) WSN networks consist of individual _____ that are able to interact with their environment by sensing or controlling _____ parameters

- a) Computers, Imaginary
- b) Network, Physical
- c) Routers, Imaginary
- d) Nodes, Physical

41) _____ controlled by a node of a wireless sensor network are perhaps not quite as multifaceted, Typically they control a mechanical device

- a) Sensor
- b) Buffer
- c) IC
- d) Actuator

42) Wildfire detection is an example of ____ application.

- a) Disaster Relief
- b) Intelligent buildings
- c) Facility management
- d) Precision agriculture

43) Since nodes may run out of energy or might be damaged, or since the wireless communication between two nodes can be permanently interrupted, it is important that the WSN as a whole is able to _____

- a) Fault Tolerant
- b) Error Tolerant
- c) Scalable
- d) Programmable

44) Since a WSN might include a large number of nodes, the employed architectures and protocols must be able _____ to these number

- a) Program
- b) Scale
- c) Tolerance
- d) Maintain

45) _____ Network that is composed of individual devices communicating with each other directly.

- a) Ad-hoc
- b) virtual
- c) Mobile
- d) wireless

46) Turning nodes into a network requires a device for sending and receiving information over a wireless channel is _____ component

- a) Communication
- b) Memory

- c) Link
- d) Fiber cable

47) A transceiver that is ready to receive but is not currently receiving anything is said to be in an _____

- a) ideal
- b) sleep
- c) transceiver
- d) active

48) _____ amplifies incoming signals up to levels suitable for further processing without significantly reducing the SNR

- a) Power Amplifier
- b) Low noise Amplifier
- c) Base band Processor
- d) RF front-end

49) Wireless Sensor Network are made up of low cost and low power sensor.

- a)TRUE
- b)FALSE

50) Optimization of wireless sensor network is based on

- a)Quality Of Service
- b)Energy Efficiency
- c)Scalability
- d)All Of The Above

UNIT 2

1) Which of the following specifies a set of media access control (MAC) and physical layer specifications for implementing WLANs?

- a) IEEE 802.16

- b) IEEE 802.3
- c) IEEE 802.11
- d) IEEE 802.15

2) Which are the features present in IPv4 but not in IPv6?

- a) Fragmentation
- b) Header checksum
- c) a and b
- d) none

3) Match the following

List 1

List 2

A) Transceivers

1) It has ability to support mobile participants.

B) Controller

2) it collect data from other sensors, processes data and it decides where and when to send the processed data.

C) Mobility

3) it is low cost supports all circuitry, such as modulation amplifications demodulation, filters and mixers required for transmission and reception of data.

D) Scalability

4) It is the capability of the network to maintain characteristics with respect to the size

Choose the correct option from those given below.

- a) A-3; B-4; C-1; D-2
- b) A-4; B-1; C-3; D-2
- c) A-2; B-4; C-1; D-3
- d) A-4; B-3; C-2 ;D-1

4) Which of the following statements is/are true?

P) LEACH is a clustering based protocol

Q) LEACH randomly choose nodes as cluster heads and do periodic reselection so that the high energy.

R) Each repetition of selection of CHs is known as Round.

- a) P only
- b) P and Q only
- c) Q only
- d) All of the above

5) A packet in Transmission Control Protocol (TCP) is called a _____

- a) Transmittable slots
- b) Packet
- c) Segment
- d) None of the above

6) Which protocol assigns an IP address to the client connected to the internet?

- 1.) DHCP
- 2.) IP
- 3.) RPC
- 4.) RSVP

7) LEACH is _____ based protocol.

- a) Star

- b)Clustering
- c)Area
- d)Data

8) _____ is a process of simultaneously transmitting two or more individual signal over a signal over a single communication channel'

- a) Multiplexing
- b) Duplexing
- c) Overpassing
- d) Sending

9) Wireless Sensor Network can be designed with_____ topology

- a)Star
- b)Mesh
- c)Tree
- d)All Of The Above

10) 1KHz=_____Hz

- a)100Hz
- b)1000Hz
- c)10000Hz
- d)10Hz

11) Match the following list with

Name	Frequency
1) Voice Frequency	a) 3-30 KHz
2) Low Frequency	b)300-3000 Hz
3) Very Low Frequency	c)30-300 KHz
4) High Frequency	d)3-30 MHz

Options

- a)1-c , 2-a , 3-d , 4-b

b)1-b , 2-c , 3-a , 4-d

c)1-a , 2-c , 3-d , 4-b

d)1-a , 2-b , 3-c , 4-d

12) _____ topology overcomes the drawback of single hop network

a)Star

b)Mesh

c)Multihop

d)None Of The Above

13) Wireless communication means communication by _____ waves.

a)Radio

b)Sound

c)Noise

d)All Of The Above

14) What is the normal range of Bluetooth

a) 1km

b) 10m

c) 1m

d) 10km

15) Which of the following statement is true to cause mobility problem in MANET ?

P: Nodes moving around, changing multihop routes in the network that have to be handled

Q: Sensor nodes are simple and energy supply is scarce the operating and networking software must be kept orders and magnitude simpler composed to today's desktop computer.

Select the correct answer from the options given below:

- a] Both P and Q
- b] Only P
- c] Only Q
- d] Neither P nor Q

16) Match List-I and List-II:

List-I	List-II
a] First class of routing protocol	1] Uses location to address Sensor node b]
Second class of routing protocol	2] Uses a data-centric approach to
class of routing protocol	disseminate interest within the network c] Third
d] fourth class of routing protocol	3] Imposes a structure on the network to
	achieve energy Efficiency, stability and
	Scalability
	4] adopts a flat network Architecture in
	which all nodes Are considered peers

Option:

- 1. a] - 1], b] - 2], c] - 4], d] - 3]
- 2. a] - 2], b] - 1], c] - 3], d] - 4]
- 3. a] - 4], b] - 3], c] - 2], d] - 1]
- 4. a] - 3], b] - 4], c] - 1], d] - 2]

17) The Noise Figure NF of an element is defined as the ratio of the

a] Noise to Signal Ratio

- b] Signal to Noise Ratio
- c] Signal to Signal Ratio
- d] Noise to Noise Ratio

18) Which of the following is the sin wave general function?

- a] $g(t) = At \cos(2 \pi ft + \phi t)$
- b] $g(t) = At \sin(2 \pi ft + \phi t)$
- c] $g(t) = At \sin(\phi t + 2 \pi ft)$
- d] $g(t) = \phi t \cos(2 \pi ft + At)$

19) What is the name of the protocol that can be classified as either connection-oriented and connectionless ?

- a] UDP
- b] TCP
- c] MAC
- d] TCDM

20) Which of the following statements are true as respect to the antennas ?

- i] Antennas couple electromagnetic energy to and from space to and from a wire or coaxial cable
- ii] Antenna is the isotropic radiator
- iii] Real antennas all exhibit directive effects, i.e., the intensity of radiation is same in all directions from the antenna.
- iv] directional antennas with certain fixed preferential transmission and reception directions can be used.
- v] Several directed antennas can be combined on a single pole to construct a sectorized antenna.

Select the correct answers from the following options given below:

- a) i], ii] iii], iv]
- b) ii], iii], iv], v]
- c) i], iii], iv], v]

d) i], ii], iv], v]

21) MAC stands for _____

- a) Medium access control
- b) Media access control
- c) Minuature access control
- d) Mixed access control

22) Which of the following performance metrics of MAC protocol?

- a] Delay, Throughput, Robustness, Scalability, Stability
- b] Polling, Delay, Throughput, Robustness, Scalability
- c] Reservation, Throughput, Robustness, Scalability, Stability
- d] Activation, Delay, Robustness, Scalability, Stability

23) Who provides reliability and congestion control, belongs to the upstream reliability guarantee group?

- a] CODA (Congestion Detection and Avoidance)
- b] ESRT (Event-to-Sink Reliable Transport)
- c] RMST (Reliable Multi Segment Transport)
- d] PSFQ (Pump Slowly, Fetch Quickly)

24) ----- has defined three different categories of services: bearer, tele, and supplementary services?

- a] ISDN
- b] TDMA
- c] GSM
- d] FDMA

d] modularity and data-based programming

25) Following are advantages of sensor network

P: Energy advantage

Q: Detection advantage

Select the correct answer from the option given below:

- 1) P
- 2) Q
- 3). Both P and Q
- 4). Neither P and Q

26) _____ is an interdisciplinary research area that draws on contributions from signal processing, networking and protocols, databases and information management, distributed algorithms, and embedded systems and architecture.

- A.) Wireless networks
- B.) Sensor networks

27) Match the following

- | | |
|----------------|--|
| 1.Sensor | A. routing of data based on geographical attributes such as locations or regions |
| 2.Sensor node | B. The process of determining a network path from a packet source node to its destination. |
| 3.Network | C. approaches that name, route or access a piece of topology data via properties that are external to a communication network. |
| 4.Routing | D. a transducer that converts a physical phenomenon that may be further manipulated by other apparatus. |
| 5.Data centric | E. a basic unit with on-board sensors, processor, memory, wireless modem and power supply. |

6. Geographic

F. a connectivity graph where nodes are sensor nodes routing and edges are communication links.

Options:

- 1) 1-B,2-F,3-D,4-C,5-A,6-E
- 2) 1-F,2-E,3-F,4-B,5-B,6-A
- 3.) 1-D,2-E,3-D,4-C,5-B,6-A
- 4) 1-F,2-D,3-E,4-A,5-C,6-B

28) Mobility and instability in wireless links prevent the use of many existing edge network gateway protocols for internetworking IP and sensor networks

- a.) True
- b.) False

29) The challenges we face in designing sensor network systems and applications include:

- a.) Limited hardware
- b.) Limited support for networking
- c.) Limited support for software development
- d) All of the above

30) Which multiplexing technique used to transmit digital signals?

- a) FDM
- b) TDM
- c) WDM
- d) FDM & WDM

31) The sharing of a medium and its link by two or more devices is called _____ a) Fully duplexing

- b) Multiplexing
- c) Microplexing
- d) Duplexing

32) In TDM, slots are further divided into _____

- a) Seconds
- b) Packets
- c) Frames
- d) Bits

33) From the following statements which are the options for Sink node.

- a. Sink node could be a part of internal network.
- b. Sink node should belong to a sensor network.
- c. Sink node is could be a part of external network.
- d. Sink node is external entity.

1. (a),(b),(c)

2. (b),(c),(d)

3. (a),(c)

4. (b),(c)

34) TDMA stands for.

- a)Time Division Multimedia Access
- b)Time Data Multiple Access
- c.)Time Division Multiple Access
- d)None of the above

35) Which of the following are types of Bluetooth.

- a.) Piconets
- b.) Scatternets
- c.)Both a and b
- d.)Neither (a) & (b)

36) Which of the following protocol provides mechanism to avoid overhearing, collisions and idle listening.

- a). B-MAC

- b). W-MAC
- c.) Both (1) & (2)
- d) S-MAC

37) Which of the following statement is False.

- a) TCP is a process-to-process protocol
- b) TCP is reliable protocol
- c) TCP does not uses port numbers.
- d).TCP creates virtual connection.

38) In W-CDMA which channel transmits signalling or user data.

- a) DPCH
- a) DPDCH
- c.) DPCCH
- d) DPPCH

39) Truncked radio system does not forms other method of wireless data transmission . No other radio carriers are used in these systems.

- a) True
- b) False

40) Which of the following are SPIN Versions

- a.SPIN-PP
- b.SPIN-PC
- c.SPIN-EC
- d.SPIN-BC
- e.SPIN-RL f.SPIN-EP

Options

- 1.(a),(d),(e),(f)
- 2.(a),(c),(d),(e)

3.(b),(c),(e),(f)

4.(a),(c),(e),(f)

41)Following MAC protocols have been developed for wireless voice and data communication networks.

- a) TDMA
- b) FDMA
- c) CDMA
- d) All of the above

d) Only Q

42)Which of the following multiplexing techniques is used to transmit digital signals?

- a. FDM
- b TDM
- c. WDM
- d. FDM & WDM

43)Which area network defines medium access control(MAC) as a sub layer of the data link presented in the OSI model.

- a. LAN (local area network)
- b. MAN (metropolitan area network)
- c. WAN (wide area network)
- d Both a and b

44)Which MAC protocol is used in WSN to reduce energy consumption and support self configuration?

- a) Sensor-MAC protocol
- b) Leach Protocol
- c) Y-MAC Protocol
- d) CSMA CD

45) In _____ we can transmit signals from a series of independent sources at the same time over the same frequency band.

- a) Frequency division multiplexing(FDM)
- b) Time division multiplexing(TDM)
- c) Space division multiplexing(SDM)
- d) Code division multiplexing(CDM)

46) Which of the following measures spectrum efficiency of wireless system?

- a) Channel capacity
- b) Radio capacity
- c) Spectral capacity
- d) Both a and c

47) It is more appropriate to address nodes in a sensor network by _____ than by _____.

- a) IP address, Physical properties
- b) Physical properties, IP address

48) Compared to FDMA, _____ offers much more flexible scheme, which comprises all technologies that allocate certain time slot for communication.

- a) FDMA
- b) SDMA
- c) TDMA
- d) Classical Aloha

49) An extreme form of attenuation is _____ of radio signals due to large obstacle

- a) Blocking
- b) Unblockling
- c) Path loss
- d) Inference

50) TCP stands for _____

- a) Transmission control protocol
- b) Transit control protocol
- c) Transaction control protocol
- d) Turner Control Protocol

UNIT 3

1) Which of the following statements is/are true?

P : Digital European Cordless Telephony (DECT) is well suited to both domestic and business use.

Q : DECT is dynamic channel allocation and digital voice coding provide a voice quality comparable to a landline

R : The DECT system is based on TCP principles.

Select the correct answer from the options given below:

- a) P and Q only
- b) P and R only
- c) Q and R only
- d) All of P, Q and R

2) Which of the following does not come under the teleservices of GSM?

- a) Standard mobile telephony
- b) Mobile originated traffic
- c) Base originated traffic
- d) Packet switched traffic

3) A wireless network interface can work in

- a) Infrastructure mode

- b) Ad hoc mode
- c) Both a and b
- d) None of the above

4) Which of the following is a transport layer protocol?

- a) stream control transmission protocol
- b) internet control message protocol
- c) neighbor discovery protocol
- d) dynamic host configuration protocol

5) What is route poisoning?

a) It sends back the protocol received from a router as a poison pill, which stops the regular updates. The use of variable length subnet masks is permitted

b) It is information received from a router that can't be sent back to the originating router. RIPv2 supports classless routing

c) It prevents regular update messages from reinstating a route that has just come up

d) It describes when a router sets the metric for a downed link to infinity

7) Which protocol should you select if the network diameter is more than 17 hops? a) RIPv1

b) RIPv2

c) EIGRP

d) OSPF

8) The transmission bandwidth of spread spectrum techniques is equal to the minimum required signal bandwidth.

a) True

b) False

9) Which of the following subsystem provides radio transmission between mobile station and MSC?

- a) BSS
- b) NSS
- c) OSS
- d) BSC

10) The bandwidth of the channel used in the hopset is called _____

- a) Hopping bandwidth
- b) Total hopping bandwidth
- c) Instantaneous bandwidth
- d) 3 dB bandwidth

11) Which part of GSM is also known as core network?

- a) Network and switching subsystem
- b) Base station subsystem
- c) GPRS Network
- d) Operation support system

12) DECT applications provides supervision in two ways, _____ using handshake mechanism and _____ by decryption at intended user.

- a) Authorization, decryption
- b) Authentication, encryption
- c) Authentication, decryption
- d) Authorization, encryption

13) DECT can be used by users in an in-building PBX.

- a) True
- b) False

- 14) Which of the following is not true for DECT?
- a) High traffic density
 - b) Long range telecommunication
 - c) Broad range of application
 - d) First pan European standard
- 15) The DECT system is based on _____ principles.
- a) TCP
 - b) IP
 - c) OSI
 - d) AMPS
- 16) What is a cluster in a cellular system?
- a) Group of frequencies
 - b) Group of cells
 - c) Group of subscribers
 - d) Group of mobile system
- 17) Modern mobile communication system use analog modulation techniques.
- a) True
 - b) False
- 18) What kind of battery panels are used in some advanced satellites?
- P: Gallium Arsenide solar panel array
- Q: Gallium Phosphate solar panel array
- Select the correct answer from option given below
- a) Both P and Q
 - b) Neither P nor Q
 - c) Only P
- 19) The _____ of user in the terrestrial mobile system is the ability of the system to know the current location of the user and to assure the validity of the same mobile number worldwide.
- a) Routing
 - b) Navigating
 - c) Localization
 - d) None of the above

20) Two components make up DECT in WSN, a _____ and a base station ca a _____, which is connected to a telephone network.

- a) Antenna, radio fixed part
- b) Mobile handset, antenna
- c) Mobile handset and radio fixed part
- d) Sensors and radio fixed part

21) Which of the following is a Disadvantage of Cellular System?

- a) Higher Capacity.
- b) Robustness.
- c) More infrastructure.
- d). The interference is only local.

22) _____ is the main signalling layer of DECT as well as _____ supports the call completion facility in a multi handset environment.

- a) Physical Layer, Cordless controller
- b) Data link layer, Radio fixed part
- c) Network layer, Network Specific

23) Which of the following routing protocols is based on a data-centric approach?

- a) Flooding
- b) Low Energy Adaptive Clustering Hierarchy.(LEACH)
- c) Sensor Protocols for Information via Negotiation.(SPIN)
- d) Geographical routing

24) A Geo satellite is at the _____ orbit and revolves in phase with Earth

- a) Equatorial
- b) Polar
- c) inclined
- d) Non-inclined

25)GPS satellite are _____ satellites

- a)GEO
- b)MEO
- c)LEO
- d)None of these

26)_____ satellite will provide universal broadband internet access

- a)GPS
- b)Iridium
- c)Teledesic
- d)none of these

27)Iridium satellites are _____ satellites

- a)GEO
- b)MEO
- c)LEO
- d)None of these

28)Low-Earth-orbit(LEO) satellite have _____ orbit

- a)Equatorial
- b)Polar
- c)inclined
- d)Non-inclined

29)LEO satellites are normally below an altitude of _____ km

- a)1000
- b)2000
- c)3000
- d)4000

30)There are (is) _____ orbit(s) for a GEO satellite

- a)one
- b)two
- c)three

d)many

31) _____ basically manages the BTS and BSS

a)BTS

b)RSS

c)BSS

d)BSC

32) What is Wired Equivalent Privacy (WEP)?

a) security algorithm for ethernet

b) security algorithm for wireless networks

c) security algorithm for usb communication

d) security algorithm for emails

33) _____ is not the component of RSS

a) BSS

b) BSC

c) MS

d)NSS

34) Apogee?

a) The Point farthest from earth

b) The Point nearest from earth

c) The Point smallest from earth

d) None of the above

35) Perigee?

a) The point farthest from earth

b) The point longest from earth

c) The point closest approach to earth

d) None of the above

36) The carrier to noise ratio for a satellite depends upon

- a) Effective Isotropic Radiated Power
- b) Bandwidth
- c) Free space path losses
- d) All of them

37) What is the application of satellite system ?

- a) Whether forecasting
- b) Terrestrial communication
- c) point to point communication
- d) Point to multipoint communication

38) Line of sight propagation is done by

- a) MEO
- b) GEO
- d) LEO
- d) SEO

39) Satellite can provide transmission capability to and from any location on

- a) Moon
- b) Earth
- c) Mars
- d) Stars

40) GEO stands for

- a) Geostationary Earth orbit
- b) Geographical Earth orbit
- c) Geostructure Element orbit
- d) Geostructure Earth orbits