USCS505:AIOT

Unit-1 IoT-An Architectural Overview and State of art

MCQ

IoT-An Architectural Overview

1. IoT stands for?

   A. Introduction of Things
   B. Internet of Things
   C. Internet of Tracking
   D. Interaction of Things

   ANSWER: B

2. Which of the following is not an advantage of IoT?

   A. Improved Customer Engagement
   B. Security
   C. Reduced Waste
   D. Enhanced Data Collection

   ANSWER: B

3. Active Engagement Features of IOT means?

   A. IoT makes the connected technology, product, or services to active engagement between each other.
   B. It makes the complete failure of the system.
   C. IoT makes things smart and enhances life through the use of data.
   D. IoT makes us dependent

   ANSWER: A

4. The number of elements in the Open IoT Architecture?

   A. 5 elements
   B. 6 elements
   C. 7 elements
   D. 8 elements

   ANSWER: C

5. An equation of internet of things..........

   A. physical object + controller sensor and actuator + internet
   B. controller sensor and actuator + internet
   C. physical object + internet
   D. Physical object + controller + internet

   ANSWER: A

6. A .... tends to convert physical attribute to an electrical signal.

   A. actuator
   B. compiler
   C. sensor
   D. motors

   ANSWER: C

7. A .... tends to convert electrical signal to physical action .

   A. actuator
   B. compiler
   C. sensor
   D. motors

   ANSWER: A

8. choose correct principle of IOT

   A. focus on the value
   B. focus on the machine
   C. build a strong machine
   D. neither one

   ANSWER: A

9. .... helps in collaborate in IOT development.

   A. physical computing
   B. chemical computing
   C. mechanism
   D. cloud computing

   ANSWER: D

10. ………… involves delivering different types of services over the Internet.

A. physical computing
B. chemical computing
C. mechanism
D. cloud computing

ANSWER: D

11. ……….. means large set of structured, unstructured and semi structured data.

A. big data
B. small data
C. physical computing
D. cloud computing

ANSWER: A

12. _____is uses certain protocols to aid sensors in connecting with real time machine to machine network.

A. real time analytics
B. data collection
C. device integration
D. real time collection

ANSWER: B

13. ……… software supporting integration binds all system devices to create body of iot system.

A. real time analytics
B. data collection
C. device integration
D. real time collection

ANSWER: C

14. The application data or input from various devices and convert it into viable actions are clear patterns human analysis is called……

A. real time analytics

B. data collection
C. device integration
D. real time collection

ANSWER: A

15. A _____ is an established set of rules that determines how data is
transmitted between different device in the same network.

A. network connection
B. TCP IP protocol
C. network protocol
D. TCP protocol

ANSWER: A

16. Which of the following is the way in which an IoT device is associated with data?

A. Internet
B. cloud
C. Automata
D. Network

ANSWER: B

17. Which of the following IoT networks has a very short range?

A. Short network
B. LPWAN
C. Sigfox
D. Short range Wireless network

ANSWER: D

18. What is the full form of the LPWAN?
A. Low Protocol Wide Area Network

B. Low Power Wide Area Network

C. Long Protocol Wide Area Network

D. Long Power Wide Area Network

ANSWER: B

19. An IoT network is a collection of _____ devices.

   A. Signal
   B. Machine to Machine
   C. Interconnected
   D. Network to Network

   ANSWER: C

20. Which one of the following is not an IoT device?

   A. Amazon echo voice controller
   B. Google Home
   C. Nest Smoke Alarm
   D. Book

   ANSWER: D

21. What is the main purpose of WoT (Web of Things) in the IoT?

   A. Improve the usability and interoperability
   B. Reduce the security
   C. Complex the development
   D. Increase the cost

   ANSWER: A

22. What is the Arduino UNO?

   A. Software
   B. Hardware device
   C. Network
   D. Protocol

   ANSWER: B

23. _____ allows the user to control electronic components.

A. Android API

B. RETful API

C. MQTT API

D. CoAP API

ANSWER: B

24. Which of the following is not an application of IoT?

A. Wearables

B. Smart Grid

C. Arduino

D. Smart City

ANSWER: C

25. Which one of the following protocols is lightweight?

A. IP

B. HTTP

C. MQTT

D. CoAP

ANSWER: C

26. What is the role of Big Data in IoT's Smart Grid architecture?

A. Filter the data

B. Locked the data

C. Store data

D. Remove Data

ANSWER: C

27. What is the real example of a smart grid device in IoT?

A. Mobile phone

B. Television

C. Smart Speaker

D. Smart Meters

ANSWER: D

28. What is the full form of the MQTT?

A. Multi-Queue Telemetry Things
B. Multiple Queue Telemetry Things
C. Message Queue Telemetry Things
D. Message Queue Telemetry Transport

ANSWER: D

29. What is the full form of ICT?

A. Inter Connect Technology
B. Internet Connection Topology
C. Information and Communication Technology
D. Infer Communication Topology

ANSWER: C

30. What is the standard port number of secure MQTT?

A. 1883
B. 8000
C. 8883
D. 8888

ANSWER: C

31. Which of the following layers provides end-to-end communication in IoT?

A. Logical layer
B. Data link layer

C. Transport layer

D. Session layer

ANSWER: C

32. Which of the following devices is used to measure the gases or liquid?

A. Optical Sensor
B. Gas Sensor

C. Smoke Sensor

D. Pressure sensor

ANSWER: D

33. Which interface does the fingerprint sensor use?

A. UART interface
B. CoAP interface

C. SPI interface

D. I2P interface

ANSWER: A

34. Which of the following protocols is used by USART?

A. RS32
B. RS232C

C. 4RS85

D. ARS349

ANSWER: B

35. What is the full form of HDLC?

A. Higher Data Level Communication
B. Higher Data Link Communication
C. High-level Data Link Control

D. High Data Level Control

ANSWER: C

36. What is another name for I2C?

A. Signal wire interface
B. Two wire interfaces
C. UART
D. USART

ANSWER: B

37. When the clock line SCL is high, the SDA is ____ transitioned.

A. Low
B. High
C. Medium
D. Average

ANSWER: A

38. What is the full form of HART?

A. Highway Application Remote Transport
B. Highway Addressable Remote Transducer
C. High Address Reduce Transport
D. High Application Remote Transport

ANSWER: B

39. What is the range of z-wave?

A. 30 to 100 m
B. 300 to 1000 m
C. 100 to 1000 m
D. Only 10 m

ANSWER: A

40. Which of the following topology is used for ZigBee Smart Energy?

A. Bus Topology
B. Ring Topology
C. Star Topology
D. Any Topology

ANSWER: C

41. What is another name of the tactile sensor?

A. Weight sensor
B. Imaging sensor
C. Proximity sensor
D. Touch sensor

ANSWER: D

42. How many types of capacitive touch sensors in IoT?

A. Two types
B. Five types
C. Seven types
D. Nine types

ANSWER: A

43. Which of the following touch sensors is used in a cell phone?

A. Resistive touch sensors
B. Human sensor
C. Capacitive touch sensor
D. Follow sensor

ANSWER: C

44. Which of the following is the example of a short-range wireless network?

    A. VPN

    B. Wi-Fi

    C. Internet

    D. WWW

    ANSWER: B

IoT Architecture-State of the Art

45. IOT – A Reference Model is a …………

    A. Scalable

    B. Secure

    C. Manageable

    D. Adjustable

    ANSWER: A

46. How many layers IoT Consist of?

    A. 5

    B. 3

    C. 4

    D. 2

    ANSWER: C

47. Which layer has network and transport Capabilities?

    A. Management layer

    B. Application layer

    C. Network layer

D. Transport layer

ANSWER: C

48. Which layer has device and gateway capabilities?

A. Device layer
B. Application layer
C. Physical layer
D. Data link layer

ANSWER: A

49. Which layer has generic and specific support capabilities?

A. Device layer
B. Application support layer
C. Physical layer
D. Data link layer

ANSWER: B

50. Which layer has IOT Application?

A. Device layer
B. Application layer
C. Physical layer
D. Data link layer

ANSWER: B

51. Which layer has generic and specific Management capabilities?

A. Device layer
B. Application support layer
C. Physical layer

D. Management layer

    ANSWER: D

52. The layer is responsible for process delivery

    A. network layer
    B. transport layer
    C. session layer
    D. data link layer

    ANSWER: B

53. Which address identifies a process on a host?

    A. physical address
    B. logical address
    C. port address
    D. specific address

    ANSWER: C

54. The data link layer takes the packets from _____ and sends them into frames
for transmission.
    A. application layer
    B. physical layer
    C. network layer
    D. transport layer

    ANSWER: C

55. Data link is not able to perform
    A. channel coding
    B. flow control
    C. error control
    D. framing

    ANSWER: A

56. The layer lies above the physical layer is
    A. data
    B. data link

C. network layer
D. transport layer

ANSWER: B

57. _____ protocol is the transmission used by the TCP/IP suite.
A. ARP
B. IP
C. RARP
D. RFID

ANSWER: B

58. IPv6 allows _____ security provisions than IPv4.
A. more
B. less
C. the same level
D. Average

ANSWER: A

59. In _____ layer, vulnerabilities are directly associated with physical access to networks and hardware.
A. physical
B. data-link
C. network
D. application

ANSWER: A

60. The network layer is considered as the _____ of the network layer.
A. backbone
B. packets
C. bytes
D. bits

ANSWER: A

61. The network layer contains which hardware device?
A. Routers, Bridges
B. Bridges only

C. Bridges and switches
D. Routers, Bridges and Switches

ANSWER: D

62. The network layer responds to request from which layer?
   A. Transport layer
   B. Data layer
   C. Application layer
   D. Session layer

   ANSWER: A

63. The network layer issues request to which layer?
    A. Transport layer
    B. Data layer
    C. Application layer
    D. Session layer

   ANSWER: B

64. What are the functions of the transport layer?
    A. Multiplexing/ Demultiplexing
    B. Connection less Services
    C. Connection oriented service
    D. Congestion control

   ANSWER: A

65. Which services are provided by transport layer?
    A. Error control
    B. Connection service
    C. Connection less service
    D. Congestion control

   ANSWER: A

66. Security based connection is provided by which layer?
    A. Network layer
    B. Session layer
    C. Application layer
    D. Transport layer

ANSWER: D

67. Transport layer can identify the symptoms of overload nodes using _____
   A. Flow control
   B. Traffic control
   C. Byte orientation
   D. Data integrity

ANSWER: B

68. Gateway provides the connection between _____ and _____

   A. Cloud and Controller

   B. Network and Cloud

   C. Network and Controller

   D. Controller and Device

   ANSWER: A

69. Sensors provide _____ data per second.

   A. Hundreds of Hundreds of data

   B. Hundreds of thousands of data

   C. Tens of Hundreds of data

   D. Tens of thousands of data

   ANSWER: D

70. A sensor uses which network?

   A. LAN and HAN

   B. HAN and PAN

   C. LAN and PAN

   D. LAN, PAN and HAN

   ANSWER: D

71. Gateway software should be smart enough to handle _____

A. GPS

B. Message

C. Logging

D. Sensors

ANSWER: C

72. _____ was to develop an architecture and technology building blocks that enable a "Real World integration in a future Internet."

A. ETSI

B. SENSEI

C. IOT–A

D. M2M

ANSWER: B

73. Hardware address is known as _____

A. MAC address

B. IP Address

C. Network Interface Card

D. Address Resolution Protocol

ANSWER: A

74. What translates IP address into MAC address?

A. Organizationally Unique Identifier

B. Address Resolution Protocol

C. Network Interface Card

D. Burned In Address

ANSWER: C

75. Networking Hardware Address is referred with _____

A. IP address

B. MAC address

C. NIC

D. Organizationally Unique Identifier

ANSWER: B

Unit-2 IoT Data Link Layer and Network Layer Protocols

IoT Data Link Layer Protocols

1. What is the standard form of WI-FI?

    A. Wired Fidelity
    B. Wired Function
    C. Wireless Fidelity
    D. Wireless Function

    ANSWER: C

2. The throughput of the IEEE standard 802.11b is _____
    A. ≤11Mbps
    B. ≤64Mbps

C. ≤74Mbps

D. ≤12Mbps

ANSWER: A

3. The frequency range of WI-FI is around _____
   A. 2.4 GHz and 5GHz
   B. 2.9 GHz and 5GHz
   C. 3.4 GHz and 5GHz
   D. 4.4 GHz and 5GHz

ANSWER: A

4. The range of the WI-FI is around _____
   A. 50 meters
   B. 60 meters
   C. 70 meters
   D. 80 meters

ANSWER: A

5. The throughput of the IEEE standard 802.11a is _____
   A. ≤54Mbps
   B. ≤64Mbps
   C. ≤74Mbps
   D. ≤84Mbps

ANSWER: A

6. The indoors and outdoors range of WIFI 4/IEEE 802.11n is around _____
   A. 10m, 100m
   B. 70m, 250m
   C. 35m, 120m
   D. 40m, 100m

ANSWER: B

7. The data rate of standard IEEE 802.11n is _____
   A. 248Mbps
   B. 250Mbps
   C. 290Mbps
   D. 298Mbps

   ANSWER: A

8. Wireless HART is which type of Protocol?
   A. Network layer protocol
   B. Data link layer protocol
   C. Application layer protocol
   D. Management layer protocol

   ANSWER: B

9. Which protocol uses Time Division Multiplex in its MAC?
   A. IEEE 802.11
   B. DHCP
   C. Wireless HART
   D. IP

   ANSWER: C

10. Which protocol uses Advanced encryption to encrypt the messages and calculate the integrity?
    A. IEEE 802.11
    B. DHCP
    C. Wireless HART
    D. IP

    ANSWER: C

11. Z-Wave is which type of Protocol?
    A. Network layer protocol
    B. Data link layer protocol
    C. Application layer protocol
    D. Management layer protocol

    ANSWER: B

12. Z-Wave is used in a wide range of _____ devices
    A. Smart Home
    B. Smart city
    C. Smart building
    D. Smart thins

    ANSWER: A

13. Remote Control is the example of which data link layer protocol?
    A. Wifi
    B. DHCP
    C. Z-wave
    D. IP

    ANSWER: C

14. Water Valves is the example of which protocol?
    A. Wifi
    B. DHCP
    C. Z-wave
    D. IP

    ANSWER: C

15. Bluetooth low energy can be used over a ……………. Distance to enable smart devices.
    A. long

B. short

C. Very long

D. Very short

ANSWER: B

16. BLE stands for ………?
   A. Bluetooth Low Energy
   B. Bluetooth light Energy
   C. Bilateral Energy
   D. Bluetooth Low Cost Energy

   ANSWER: A

17. Which data link layer protocol is used for Mobile payments?
   A. BLE
   B. DHCP
   C. Z-wave
   D. IP

   ANSWER: A

18. Which data link layer protocol is used for exercise sensors?
   A. Zigbee
   B. DHCP
   C. BLE
   D. IP

   ANSWER: C

19. Which data link layer protocol is used for Home Automation?
   A. Zigbee
   B. DHCP
   C. wifi

D. BLE

ANSWER: D

20. Which data link layer protocol is used for Wireless Medical Devices?
    A. Zigbee
    B. DHCP
    C. Z-wave
    D. BLE

    ANSWER: D

21. Zigbee can be used over a ……………. Distance by transmitting data to the intermediate devices to reach more distance ones.
    A. long
    B. short
    C. Very long
    D. Very short

    ANSSWER: A

22. Which Data link layer protocol targeted at Radio Frequency Application?
    A. Zigbee
    B. DHCP
    C. Z-wave
    D. BLE

    ANSWER: A

23. Which data link layer protocol is used for Honeywell thermostats?
    A. Zigbee
    B. DHCP
    C. Z-wave
    D. BLE

ANSWER: A

24. Which data link layer protocol is used for Honeywell Amazon echo?
    A. DHCP
    B. Zigbee
    C. Z-wave
    D. BLE

    ANSWER: B

25. Which type of IP address DASH7 protocol has?
    A. IPv4
    B. IPv8
    C. IPv6
    D. IPv3

    ANSWER: C

26. which protocol acquires sensors data and use that to manage social network applications.
    A. DHCP
    B. Zigbee
    C. Z-wave
    D. DASH7

    ANSWER: D

27. DASH7 protocol has ……………… Data Rate
    A. Higher
    B. Lower
    C. Shorter
    D. Average

ANSWER: A

28. Which model is used in DASH7 protocol?
    A. Client-Server Model

    B. Publish- Subscriber Model

    C. Pull-Push Model

    D. Client-Client Model

    ANSWER: C

29. What is Low power wide area Network?
    A. LoRaWAN

    B. LPWAN

    C. LPWA

    D. LPRWN

    ANSWER: B

30. Bidirectional Communication is required in which Data link layer protocol?
    A. LoRaWAN

    B. LPWAN

    C. LPWA

    D. LPRWN

    ANSWER: A

31. CoAP is specialized in _____

A. Internet applications

B. Device applications

C. Wireless applications

D. Wired applications

ANSWER: A

32. In which layer is CoAP?

A. Control layer

B. Transport layer

C. Service layer

D. Application layer

ANSWER: C

33. CoAP provides which of the following requirements?

A. Multicast support and simplicity

B. Low overhead and multicast support

C. Simplicity and low overhead

D. Multicast support, Low overhead, and simplicity

ANSWER: D

34. The core of the protocol is specified in _____

A. RFC 7254

B. RFC 7252

C. RFC 7452

D. RFC 7524

ANSWER: B

35. Which is open standard?

A. HTTP, MQTT, XMPP and CoAP

B. MQTT, CoAP and HTTP

C. XMPP and HTTP

D. CoAP and MQTT

ANSWER: D

36. CoAP is one of the latest application layer protocol developed by _____ for smart devices to connect to Internet.

    A. ETSI

    B. IETF

    C. oneM2M

    D. BBF

    ANSWER: B

37. CoAP is a specialized _____ protocol.

A. Web Transfer

B. Power

C. Application

D. Resource

ANSWER: A

38. URI and content type support is which protocol feature?

A. HTTP

B. UDP

C. CoAP

D. SPI

ANSWER: C

[IoT Network layer protocol](#)

39. Which type of address is this 193.168.0.1?
   A. IPv4
   B. IPv8
   C. IPv6
   D. IPv3

ANSWER: A

40. Which of the following field in IPv4 datagram is not related to fragmentation?
   A. Flags
   B. Offset
   C. Types of service
   D. Identifier

   ANSWER: C

41. IPv4 delivery mechanism is used by
   A. IEEE protocol
   B. TCP/IP protocol
   C. UDP
   D. Identifier

ANSWER: B

42. The size of an IP address in IPv6 is _____
    A. 4 bytes
    B. 128 bits
    C. 8 bytes
    D. 100 bits

    ANSWER: B

43. IPv6 does not use _____ type of address.
    A. broadcast
    B. multicast
    C. Anycast
    D. unicast

ANSWER: A

44. Which among the following features is present in IPv6 but not in IPv4?
    A. Fragmentation
    B. Header checksum
    C. Options
    D. Anycast address

ANSWER: D

45. Combination of IPV6 and low power personal area network is called ....
    A. 6LOWPAN
    B. LOWAN
    C. LoRaWAN
    D. WAN

    ANSWER: A

46. Which protocol allows for the smallest devices with limited processing ability to transmit information wirelessly using an internet protocol.
    A. 6LOWPAN
    B. LOWAN
    C. LoRaWAN
    D. WAN

    ANSWER: A

47. Gaming Zones and even online gaming sites benefit hugely by having …… Connectivity.
    A. 6LOWPAN
    B. LOWAN
    C. IPv6
    D. WAN

ANSWER: C

48. ………… is the proposed multilayer architecture for Low power Lossy Network (LLN)
    A. 6LOWPAN
    B. 6TiSCH
    C. IPv6
    D. WAN

    ANSWER: B

49. Which network layer protocol is used in forest fire detection, home automation and smart city.
    A. IPv4
    B. IPv6
    C. LWPAN
    D. 6TiSCH

    ANSWER: D

50. _____Time-Slotted Channel Hopping (TSCH) with IPv6.
   A. IPv4
   B. IPv6
   C. LWPAN
   D. IEEE802.15.4

   ANSWER: D

51. The Neighbor Discovery Protocol is known as_____
   A. ND
   B. IPv6
   C. LWPAN
   D. IEEE802.15.4

   ANSWER: A

52. The _____ is a protocol in the Internet protocol suite used with Internet Protocol Version 6 (IPv6).
   A. IPv4
   B. IPv6
   C. ND
   D. IEEE802.15.4

   ANSWER: C

53. _____ is responsible for gathering various information required for internet communication.
   A. IPv4
   B. ND
   C. IEEE 802.11a
   D. IEEE802.15.4

   ANSWER: B

54. The _____ is a network management protocol used on Internet Protocol networks for automatically assigning IP addresses

   A. IPv4

   B. ND

   C. DHCP

   D. IEEE802.15.4

   ANSWER: C

55. The Dynamic Host Configuration Protocol is called _____

   A. IPv4

   B. DCP

   C. DHCP

   D. IEEE802.15.4

   ANSWER: C

56. Router (default gateway), DNS Servers, and DNS Domain Name are the examples of which protocol?

   A. 3GPP

   B. DCP

   C. DHCP

   D. IEEE802.15.4

   ANSWER: C

57. ICMP is the companion of

   A. IP Transmission

   B. IP Packet

   C. IP frame

   D. IP Protocol

   ANSWER: D

58. During error reporting, ICMP always report error messages to

A. Source

B. Destination

C. Station

D. Header

ANSWER: A

59. What is the header size of ICMP message?

A. 8 bytes

B. 16 bytes

C. 8 bits

D. 16 bits

ANSWER: A

60. Routing Protocol for Low-Power and Lossy Networks is known as_____ .

A. RLLP

B. RPLP

C. RPL

D. RPLLN

ANSWER: C

61. _____ routing protocol that is standardized for the Internet of Things (IoT) by Internet-Engineering Task Force (IETF).

A. IPv4

B. IPv6

C. ND

D. IEEE802.15.4

ANSWER: B

62. Which protocol can quickly create network routes, share routing knowledge and adapt the topology in an efficient way.

A. IPv4

B. IPv6

C. ND

D. RPL

ANSWER: D

63. ………….. protocol is the extension of the RPL protocol.
   A. IPv4
   B. CORPL
   C. ND
   D. RPL

   ANSWER: B

64. Channel-Aware Routing Protocol is a _____routing protocol designed for underwater communication
   A. Symmetric
   B. Asymmetric
   C. Distributed
   D. Divided

   ANSWER: C

65. When new data is needed_____ sends a Ping packet which is replied with the data from the sensors nodes.
   A. CARP
   B. CORPL
   C. ND
   D. RPL

   ANSWER: A

66. This_____ network protocol is designed for cognitive networks
      A. CARP
      B. CORPL

C. ND

D. RPL

ANSWER: B

67. RPL forms a _____ topology which is based on different optimizing process called Objective Function (OF).
    A. Star
    B. Mesh
    C. Single line
    D. Tree

    Answer: D

68. _____ messages communicate information about network connectivity issues back to the source of the compromised transmission.
    A. RPL
    B. ICMP
    C. DHCP
    D. LPWAN

    ANSWER: B

69. Which level is the network layer in the OSI model?

    A. Third level

    B. Fourth level

    C. Second level

    D. Fifth layer

    ANSWER: A

70. Data in network layer is transferred in the form of _____

    A. Layers

    B. Packets

    C. Bytes

    D. Bits

    ANSWER: B

71. The network layer is considered as the _____ of the network layer.

    A. backbone

    B. packets

    C. bytes

    D. bits

    ANSWER: A

72. The network layer contains which hardware device?

    A. Routers, Bridges

    B. Bridges only

    C. Bridges and switches

    D. Routers, Bridges and Switches

    ANSWER: D

73. Network layer protocol exits in _____

    A. Host

B. Switches

C. Packets

D. Bridges

ANSWER: A

74. What are the common protocols associated with the network layer?

A. Address Resolution Protocol

B. Reverse Address Resolution Protocol

C. Internet protocol

D. Neighbour Discovery Protocol

ANSWER: C

75. The network layer responds to request from which layer?

A. Transport layer

B. Data layer

C. Application layer

D. Session layer

ANSWER: A

Unit-3 Transport, Session and Service layer Protocols

Transport layer Protocols

1. _____ does not provide reliable end to end communication.
   A. TCP
   B. UDP
   C. SMTP
   D. 3GPP

   ANSWER: B

2. UDP has a service which is_____
   A. Connection Oriented
   B. Connection less
   C. Connection Origin
   D. Connection Available

   ANSWER: B

3. In the field of User Datagram Protocol(UDP) datagram Would be _____ .
   A. 4 byte
   B. 8 byte
   C. 20 byte
   D. 28 byte

   ANSWER: B

4. UDP is very simple protocol using _____
   A. Minimum of overhead
   B. Maximum of overhead
   C. Periodic overhead
   D. Complex overhead

   ANSWER: A

5. TCP has a service which is_____
    A. Connection Oriented
    B. Connection less
    C. Connection Origin
    D. Connection Available

    ANSWER: A

6. _____provides communication between an application program and the Internet Protocol.
    A. TCP
    B. UDP
    C. SMTP
    D. 3GPP

    ANSWER: A

7. _____allowing a Transmission Control Protocol (TCP) connection to use multiple paths to maximize resource usage and increase redundancy.
    A. MPTCP
    B. UDP
    C. SMTP
    D. 3GPP

    ANSWER: A

8. _____is an effort towards enabling the simultaneous use of several IP-addresses/interfaces by a modification of TCP.
    A. TCP
    B. UDP
    C. SMTP
    D. MPTCP

    ANSWER: D

9. DCCP stands for_____
   A. Design Control Connection less Protocol
   B. Design Congestion control Protocol
   C. Derive Congestion control Protocol
   D. Datagram Congestion control Protocol

   ANSWER: D

10. _____ is useful for applications with timing constraints on the delivery of data.
    A. DHCP
    B. DCCP
    C. TCP
    D. MPTCP

    ANSWER: B

11. SCTP is a _____ protocol that ensures reliable, in-sequence transport of data.
    A. Transport layer protocol
    B. Session layer protocol
    C. Service layer protocol
    D. Session layer Protocol

    ANSWER: A

12. SCTP Stands for_____
    A. Secure Control Transmission Protocol
    B. Stream Control Transmission Protocol
    C. Service Control Transmission Protocol
    D. Session Control Transmission Protocol

    ANSWER: B

13. TLS is used to _____ in transit.

A. Decrypt Data

B. Decode Data

C. Encrypt Data

D. Encode Data

ANSWER: C

14. _____ is encrypting the communication between web applications and servers.

A. TLS

B. DTLS

C. Upnp

D. 3GPP

ANSWER: A

15. _____is a protocol based on TLS that is capable of securing the datagram transport.

A. TLS

B. DTLS

C. Upnp

D. 3GPP

ANSWER: B

16. What are the functions of the transport layer?

A. Multiplexing/ Demultiplexing

B. Connection less Services

C. Connection oriented service

D. Congestion control

ANSWER: A

17. Which services are provided by transport layer?

A. Error control

B. Connection service

C. Connection less service

D. Congestion control

ANSWER: A

18. TCP and UDP are called _____

A. Application protocols

B. Session protocols

C. Transport protocols

D. Network protocols

ANSWER: C

19. Security based connection is provided by which layer?

A. Network layer

B. Session layer

C. Application layer

D. Transport layer

ANSWER: D

20. Using which method in transport layer data integrity can be ensured?

A. Checksum

B. Repetition codes

C. Cyclic redundancy checks

D. Error correcting codes

ANSWER: A

21. In Transport Layer, buffer overrun can be reduced by using what?

A. Traffic control

B. Flow control

C. Byte orientation

D. Data integrity

ANSWER: B

22. Transport layer can identify the symptoms of overload nodes using _____

A. Flow control

B. Traffic control

C. Byte orientation

D. Data integrity

ANSWER: B

23. Transport layer receives data in the form of _____

A. Packets

B. Byte streams

C. Bits stream

D. Both packets and Byte stream

ANSWER: B

24. Transport layer is which layer in OSI model?

A. Fourth layer

B. Third layer

C. Second layer

D. Fifth layer

ANSWER: A

25. Congestion control can control traffic entry into a telecommunications network, so to avoid _____

A. Congestive connection

B. Connection collapse

C. Congestive collapse

D. Collapse congestive

ANSWER: C

26. FCP stands for _____

A. Fiber Channel Protocol

B. Field Channel Protocol

C. Fast Channel Protocol

D. Fiber Carrying Protocol

ANSWER: A

27. UDP packets are called as _____

A. Segments

B. Checksum

C. Frames

D. Datagrams

ANSWER: D

28. _____ do not provide end to end communication.

A. TCP

B. UDP

C. Both TCP and UDP

D. Neither TCP nor UDP

ANSWER: B

29. ARQ stands for _____

A. Automatic Repeat Request

B. Automatic Request Repeat

C. Application Repeat Request

D. Application Request Repeat

ANSWER: A

Session layer protocols

30. What does HTTP do?
    A. Enables network resources and reduces perception of latency
    B. Reduces perception of latency and allows multiple concurrency exchange
    C. Allows multiple concurrent exchange and enables network resources
    D. Enables network resources and reduces perception of latency and Allows multiple concurrent exchange

    ANSWER: D

31. HTTP allows which response?
    A. Multiplexing
    B. Serial
    C. Coherent
    D. Binary

   ANSWER: A

32. Which protocol provides server push?
    A. SPI
    B. MQTT
    C. CoAP
    D. HTTP

ANSWER: D

33. HTTP expands?

      A. HyperText Transfer Protocol

      B. HyperTerminal Transfer Protocol

      C. HyperText Terminal Protocol

      D. HyperTerminal Text Protocol

    ANSWER: A

34. How many types of message formats are there in HTTP protocol?

      A. 4 types

      B. 3 types

      C. 2 types

      D. 5 types

    ANSWER: A

35. Does HTTP protocol have _____ handshakes.

      A. 2 way

      B. 1 way

      C. 3 way

      D. 5 way

    ANSWER: C

36. XMPP Full form is _____

      A. Extensible Messaging and Presence Protocol

      B. Extensible Module and presence protocol

      C. Extensible Messaging and Presence Protocol

      D. Extensible Messaging and Presence Protocol

    ANSWER: A

37. XMPP is used for streaming which type of elements?

      A. XPL

B. XML

C. XHL

D. MPL

ANSWER: B

38. XMPP creates _____ identity.

A. device

B. email

C. message

D. data

ANSWER: A

39. Which protocol has a quality of service?

A. XMPP

B. COAP

C. MQTT

D. HTTP

ANSWER: A

40. XMPP uses _____ architecture.

A. Decentralized client-server

B. Centralized client-server

C. Message

D. Public/subscriber

ANSWER: A

41. MQTT is mainly used for _____

A. M2M communication

B. Device communication

C. Internet communication

D. Wireless communication

ANSWER: A

42. Which is an open standard?
   A. CoAP
   B. MQTT
   C. XMPP
   D. HTTP

ANSWER: B

43. MQTT is _____ oriented.
   A. Data
   B. Message
   C. Network
   D. Device

ANSWER: B

44. Standard ports of MQTT are _____
   A. I2C
   B. SSL
   C. USART
   D. TCP/IP

ANSWER: D

45. Full form of MQTT _____
   A. Message Queuing Telemetry Transport
   B. Message Queuing Telegram Transport
   C. Message Queue Telegram Transport
   D. Message Queue Telemetry Transport

ANSWER: A

46. What are the key components of a M2M system?
   A. Vortex DDS

B. Smart Homes

C. Sensors and Wi-Fi

D. Protocols

ANSWER: C

47. URI and content type support is which protocol feature?

A. SPI

B. UDP

C. HTTP

D. CoAP

ANSWER: D

48. XMPP creates _____ identity.

A. device

B. email

C. message

D. data

ANSWER: A

49. XMPP supports _____

A. Structured data

B. Foundation

C. Federation

D. Jabber ID

ANSWER: C

50. Which protocol has a quality of service?

A. XMPP

B. HTTP

C. CoAP

D. MQTT

ANSWER: A

51. The original transport protocol for XMPP.

A. FCP

B. TCP

C. MCP

D. HCP

ANSWER: B

52. XMPP uses _____ architecture.

A. Decentralized client–server

B. Centralized client–server

C. Message

D. Public/subscriber

ANSWER: A

53. XMPP implementation uses _____

A. CoAP

B. Gaming

C. Email

D. Polling

ANSWER: D

54. The architecture of the XMPP network is similar to _____

A. Chat box

B. Web browser

C. Gaming

D. Email

ANSWER: D

55. What is the format of IP address?

A. 34 bits

B. 64 bits

C. 16 bits

D. 32 bits

ANSWER: D

56. Version 6 of IP address has how many bits.

A. 64 bits

B. 128 bits

C. 32 bits

D. 256 bits

ANSWER: B

57. How many version /s of IP's are there?

A. 4 versions

B. 3 versions

C. 2 versions

D. 1 version

ANSWER: C

58. The design of the Internet protocol suites adhere to the _____ principle.

A. Data corruption

B. Connection oriented

C. End to End principle

D. Reliability

ANSWER: C

59. _____ adjusts the segment size to be smaller than MTU.

A. Internet Protocol 6

B. User Datagram Protocol

C. Internet Protocol 4

D. Transmission Control Protocol

ANSWER: D

60. What are called routers?

A. The devices that operates at session layer

B. The devices that operates at data layer

C. The devices that operates at application layer

D. The devices that operates at network

ANSWER: D