Questions from Lecture notes:

Lecture 1:

1. How is TCP different than UDP?

Select one or more correct answers:

1. UDP requires a setup between client and server processes
2. TCP provides reliable data transfer between sending and receiving process
3. TCP does not have flow control and UDP has
4. UDP provides unreliable data transfer between sending and receiving process
5. TCP does not have congestion control and UDP has

Correct answers: b and d

2. Why UDP exists?

Select one or more correct answers:

1. We need it for reliable data transfer
2. We need it because it has no data loss
3. We need it for applications where speed is more important than no data loss
4. It has no purpose TCP is enough

Correct answers: c

Lecture 2:

3. What are the layers of the OSI model in order?

Select one or more correct answers:

1. physical layer, data-link layer, network layer, transport layer, session layer, presentation layer, application layer
2. network layer, transport layer, session layer, presentation layer, application layer, physical layer, data-link layer
3. physical layer, data-link layer, session layer, presentation layer,network layer, transport layer, application layer
4. physical layer, data-link layer, network layer,, application layer, transport layer, session layer, presentation layer
5. physical layer, data-link layer, network layer, transport layer, presentation layer, application layer

Correct answers: a

4. Some operating systems are Little Endian and some are Big Endian

1. True
2. False
3. All systems are Little Endian
4. All systems are Big Endian

Correct answers: a

Lecture 3:

5. Which layers are the same in TCP/IP and OSI models?

1. Transport layer
2. Session layer
3. Presentation layer
4. Physical layer
5. They do not have layers that are the same

Correct answers: a

6. Which are network layer protocols in the OSI model?

1. HTTP, LAN, UDP
2. DNS, IPv4, TCP
3. IPv4, IPv6, ICMP
4. IPv4, IPv6, FTP
5. FTP, DNS, SMTP

Correct answers: c

7. Which are application layer protocols in the OSI model?

1. HTTP, HTTPS, DHCP
2. DNS, IPv4, TCP
3. IPv4, IPv6, ICMP
4. IPv4, IPv6, FTP
5. FTP, DNS, SMTP

Correct answers: a and e

8. Which are physical layer protocols in the OSI model?

1. HTTP, LAN, UDP
2. DNS, IPv4, TCP
3. IPv4, IPv6, ICMP
4. LAN, USB, Ethernet
5. LAN, DNS, SMTP

Correct answers: d

Lecture 4:

9. How DNS works?

1. DNS is a protocol which automatically assigns IP addresses
2. The computer sends the URL you type to a DNS server and gets the IP address.
3. DNS is a protocol that changes source and destination IP addresses
4. The computer sends the FQDN from the URL you type to a DNS server and gets the ip address for the FQDN.
5. None of the above

Correct answers: d

Lecture 5:

10. What is ARP?

1. It is Address Resolution Protocol
2. It is a protocol for data-link layer
3. It is similar with DNS just on local LAN’s
4. None of the above

Correct answers: a, b, c

Lecture 7:

11. What is an IP?

1. A network layer protocol in the OSI model
2. 32-bit identifier for host
3. A transport layer protocol in the OSI model
4. 32-bit identifier for router interface
5. None of the above

Correct answers: a, b, d

Lecture 8:

12. Why is udp lighter than tcp?

1. It is not, tcp is lighter
2. Because it contains only 28 bytes plus the app data
3. Because it does not need the destination IP
4. Because it does not need the checksum

Correct answers:b

13. Select the true statments about IP checksum:

1. Is the 16-bit result of the sum of the header words in the IP
2. It is used in both IPv4 and IPv6 protocols
3. It is used only in IPv4, in IPv6 the check is done in the data-link layer and transport layer
4. It is used to detect errors in datagram header

Correct answers: a,c,d

Lecture 9:

14. Why is useful Poisoned reverse?

1. It is not
2. It can help avoid Distance Vector Routing protocols running in infinite loops
3. It helps Routing Protocols find the route faster
4. Because it sends routing table to all the routers
5. None of the above

Correct answers: b

Lecture TCP Chapter 3:

15. Select the true statements about network-assisted congestion control:

1. Routers provide feedback to end systems
2. No explicit feedback from the network
3. It is used by TCP
4. None of the above

Correct answers: a

Network Devices questions:

16. Which of the following devices is a component of a computer which connects him to the networking device?

1. Bridge
2. Hub
3. Nic card
4. Gateway
5. None of the above

Correct answers: c

17. Which of the following devices modulates digital signals into analog signals?

1. Bridge
2. Hub
3. Switch
4. Modem
5. None of the above

Correct answers: d

18. Which of the following devices broadcast the packet received to all hosts?

1. Bridge
2. Hub
3. Switch
4. Modem
5. None of the above

Correct answers: b

19. Which of the following devices connects two LAN segments?

1. Hub
2. Bridge
3. Repeater
4. Switch
5. Modem
6. None of the above

Correct answers: b

20. Which of the following devices are OSI layer 2 devices?

1. Router
2. Hub
3. Bridge
4. Repeater
5. Switch
6. Modem
7. None of the above

Correct answers: c, e

21. Which of the following devices are OSI layer 1 devices?

1. Router
2. Hub
3. Bridge
4. Repeater
5. Switch
6. Modem
7. None of the above

Correct answers: b, d, f

22. Which of the following devices are OSI layer 3 devices?

1. Router
2. Hub
3. Bridge
4. Repeater
5. Switch
6. Modem
7. None of the above

Correct answers: a

23. Which of the following devices has the functionality of a bridge and a router?

1. Router
2. Hub
3. Bridge
4. Repeater
5. Switch
6. Brouter
7. Modem
8. None of the above

Correct answers: f

24. Which of the following devices connects networks with different protocols?

1. Router
2. Hub
3. Bridge
4. Repeater
5. Switch
6. Brouter
7. Gateway
8. Modem
9. None of the above

Correct answers: g

25. Modulator and demodulator as combined is known as:

1. Modulus
2. Modem
3. Mod switch
4. Mod access
5. Router
6. None of the above

Correct answers: b

Questions from reference books:

26. Which of the following statments are true about NAT?

1. NAT is a process of changing the source and destination IP addresses.
2. NAT is a network protocol
3. NAT can increase the security of LAN devices
4. None of the above

Correct answers a,b and c

27. How is a hub different from a switch?

Select one or more correct answers:

1. A hub works at physical layer
2. A switch works at data-link layer
3. A hub can send and receive data at the same time
4. A switch stores mac address table
5. None of the above

Correct answers: a, b, c and d

28. Which of the following addresses are reserved?

Select one or more answers

1. 0.0.0.0
2. 1.1.1.1
3. 256.256.256.256
4. 189.9.0.0
5. 255.255.255.255
6. None of the above

Correct answers: a and e

29. What is true about guided media and unguided media?

1. With guided media, the waves propagate in the air
2. With unguided media, the waves propagate in the air
3. With guided media, the waves are guided along a solid medium
4. With unguided media, the waves are guided along a solid medium
5. None of the above

Correct answers: b and c

30. What differs between DSL internet access and hyber fiber-coaxial internet access?

1. Fiber-coaxial uses existent phone line
2. A telephone call and an internet connection can share the DSL link at the same time
3. DSL makes use of existent cable television infrastructure
4. Fiber-coaxial network is divided into a downstream chanel and an upstream chanel.
5. None of the above

Correct answers: b and d

31. What is store and forward transmission?

1. It means storing the first bits of a packet before forwarding to the outbound link.
2. It means at every step storing all bits of all packets and forward them to the outbound link
3. It means that the packet switch must recieve the full packet before sending to the outbund link
4. None of the above

Correct answers: c

32. What is the formula of an end delay of transpotation? (N -1 routes between source and destination, the packet has L bits, transmission rate R bits/sec)

1. Delay = N\*R\*L
2. Delay = (L\*N)/R
3. Delay = N\*R/L
4. Delay = (R\*L)/N
5. Delay = N\*(L/R)
6. None of the above

Correct answers: b and e

33. How many usable ip addresses are available in the 192.168.0.0/24 network?

1. 128
2. 512
3. 127
4. 256
5. 129
6. 254

Correct answers: f

34. Is the address 51.32.180.128 an available address in the 51.32.180.128/26 network?

1. No
2. Yes
3. The ip is a reserved ip address, it is not available for any network
4. None of the above

Correct answers: a

35. Why do we need a broadcast reserved IP address?

1. Routing Information Protocol uses broadcast IP to map the topology of the network.
2. We do not need it with the current technology
3. DHCP uses broadcast IP to dynamically assign an IP address to computers on a network.
4. None of the above

Correct answers: a and c

36. How is an FQDN different from an URL?

1. FQDN contains DNS namespace and URL doesn’t
2. An URL contains a FQDN
3. An URL contains an application layer protocol
4. A FQDN contains an URL
5. None of the above

Correct answers: b and c

37. Select which of the following statements are true about HTTP?

1. Stands for HyperText TransferProtocol
2. It has a secure version called HTTPS
3. Uses TCP as transport protocol
4. It is not a stateless protocol
5. None of the above

Correct answers: a,b,c

38. Select which of the following statements are true about FTP?

1. Stands for File Transfer Protocol
2. It uses UDP as transport protocol
3. It uses 2 TCP connections
4. Throughout the session it does not care about user state
5. None of the above

Correct answers: a,c

39. What a router processor does?

1. Executes routing protocols
2. Maintains routing tables
3. Computes forwarding table for router
4. None of the above

Correct answers: a,b,c

40. Select which of the following statements are true about the Link Layer in the OSI model?

1. It is implemented in the nic card of the device
2. One of the error detection methods is checksum
3. It adds the IP address as a header to the data-gram
4. One of the error detection methods is parity bit
5. None of the above

Correct answers: a,b,d