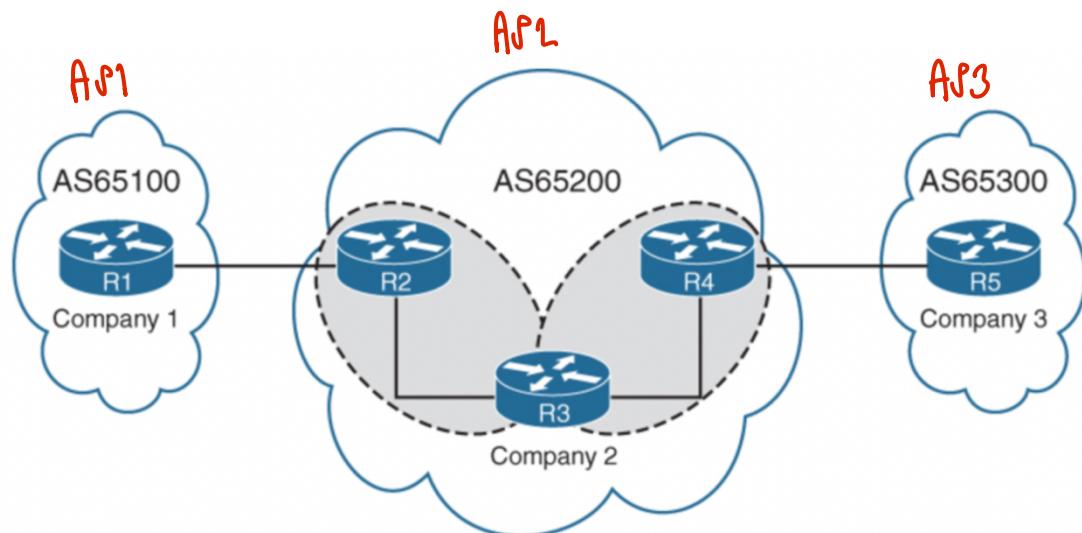
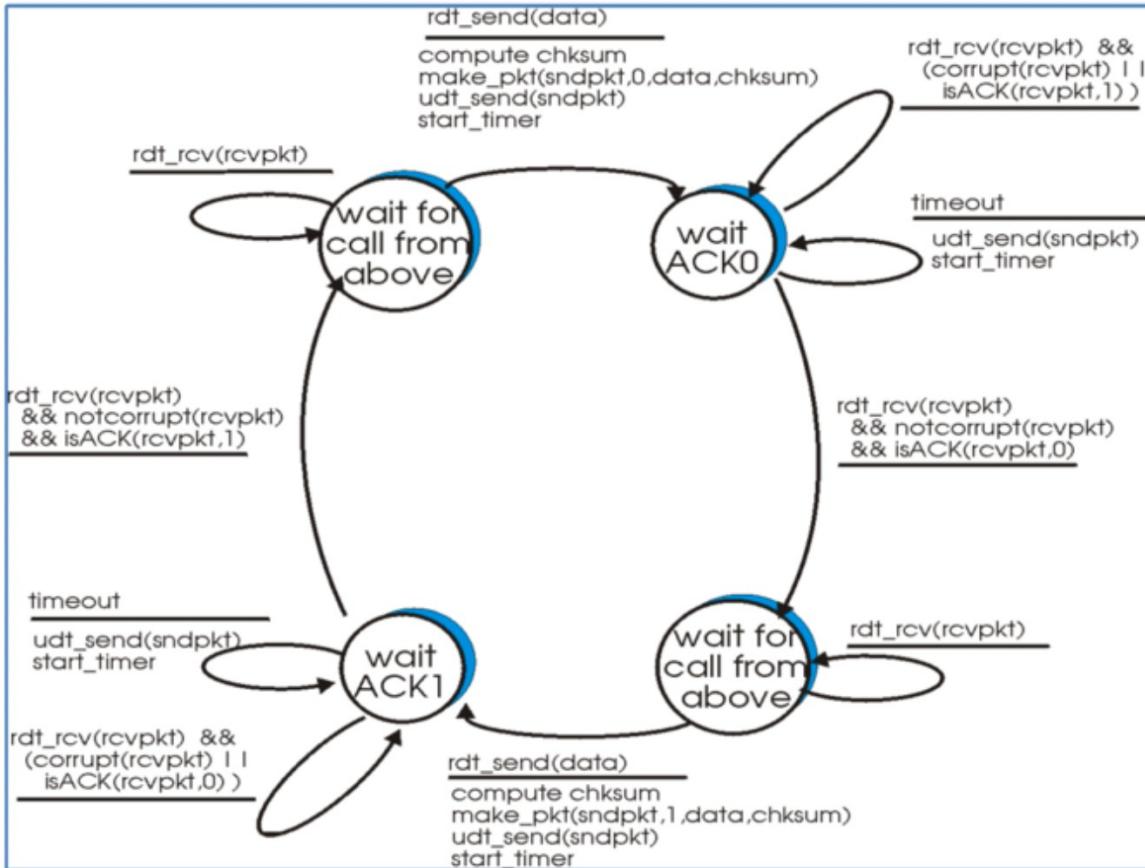


★ Different AS



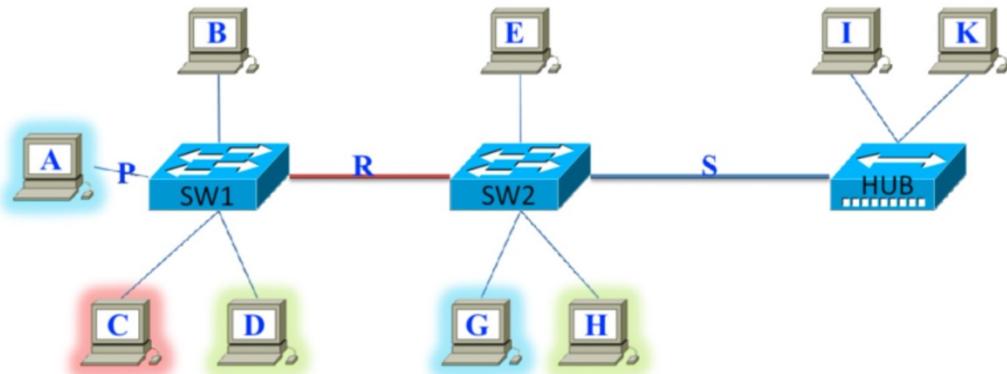
1. How can **R3** route packet from host in its subnet to host in **AS65100**?
 1. IGMP
 2. ICMP
 - 3. iBGP** Because it's routing over AS
 4. OSPF
2. How can **R3** route packet from host in its subnet to a group of hosts in **AS65200**?
 1. IGMP
 2. ICMP
 3. iBGP
 - 4. OSPF** Because it's in same AS
3. How can **R3** find **RTT** to host in **AS 65300**?
 1. IGMP
 - 2. ICMP** Traceroute; ask for RTT & time spent among route between hop.
 3. iBGP
 4. OSPF
4. How can **R4** route packet from host in its subnet to host in subnet in **which R2 is default gateway**?
 1. IGMP
 2. ICMP
 3. iBGP
 - 4. OSPF** Default gateway is R3, it's in same subnet & AS
5. What is required for **creating routing table** in data plane of **R2, R3, R4** for **intra domain routing** of packets?
 1. number of hops between each routers
 - 2. advertising of routing tables from R2, R3, and R4**
 3. cost of links
 4. reachability information from neighbouring AS



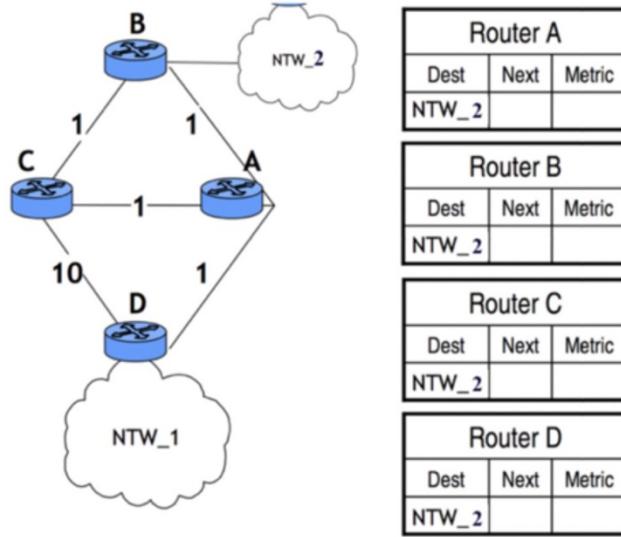
ACK

6. If **sender** receive **non corrupted** acknowledge, what will be **happen next**?
 1. start_timer **X**
 2. udt_send(sndpkt)
 3. wait for rdt_recv(rcvpkt) from application **X**
 4. make_pkt(sndpkt, 1, data,checksum) **X**
7. In **Which** of the followings **events**, **sender** will **transmit sndpkt** ?
 1. Application call for rdt_send(data)
 2. rdt_recv(rcvpkt) is ACK(rcvpkt, 1)
 3. **timeout** from udt_send(sndpkt)
 4. rdt_recv(rcvpkt) is ACK(rcvpkt, 0)
8. If **receiver** receives **corrupted packet**, what will be done by receiver in **response to receiving corrupted packet** ?
 1. Send not_ack back to sender.
 2. Reset timer of sender
 3. make_pkt(sndpkt, data,1,checksum)
 4. Do nothing
9. What does "network.websocket.max-connection = 200" mean ?
 1. up to 200 event-driven responses without having to poll the server for a reply.
 2. up to 200 event-driven responses with 200 polling to the server for a reply.
 3. **up to 200 event sent by the WebSocket object when a message is received from the server.**
 4. up to 200 event sent by the WebSocket object when a message is received from the browser.
10. How many objects in one web page, from www.simsuremak.com, that can be access within one TCP connection using HTTP 2.0 with "network.spdy.default.concurrent = 100" ?
 - 1** 2
 2. 4
 3. 6
 4. 8

From Fig. 3, answer to question# 11 to # 15.



11. If there are 3 VLANs with 3 different net-ids, AGIK, BCE, and DH. Which of the following message exchange is not possible without router ?
 1. Exchanging between I and K
 2. Exchanging between A and G
 3. Exchanging between B and E
 4. Exchanging between D and E
12. Which of the following is true ?
 1. Broadcasting domain is the same for all hosts connecting to SW1
 2. There are single collision domain between I and K.
 3. There are 3 virtual switches on 2 physical switches .
 4. D and H are in the same broadcasting domain. 234
13. If A is 10.0.0.10, then which of the following is possible for B ?
 1. 10.0.0.20
 2. 172.16.0.5
 3. 172.16.0.6
 4. 192.168.0.20
14. If A is 10.0.0.10, then which of the following is possible for K ?
 1. 10.0.0.20
 2. 172.16.0.5
 3. 172.16.0.6
 4. 192.168.0.20
15. Which of the following is true ?
 1. There are P for B and E
 2. P is similar to S
 3. P is similar to R
 4. There are only one collision domain



16. What is metric for Router A to NTW_2 ?

1. 1
2. 2
3. 3
4. 4

17. What is metric for Router D to NTW_2 ?

1. 1
2. 2
3. 3
4. 4

18. If there is no “10” between C and D and if routing between C and D ,What is the maximum number of hops between subnets in C and D ?

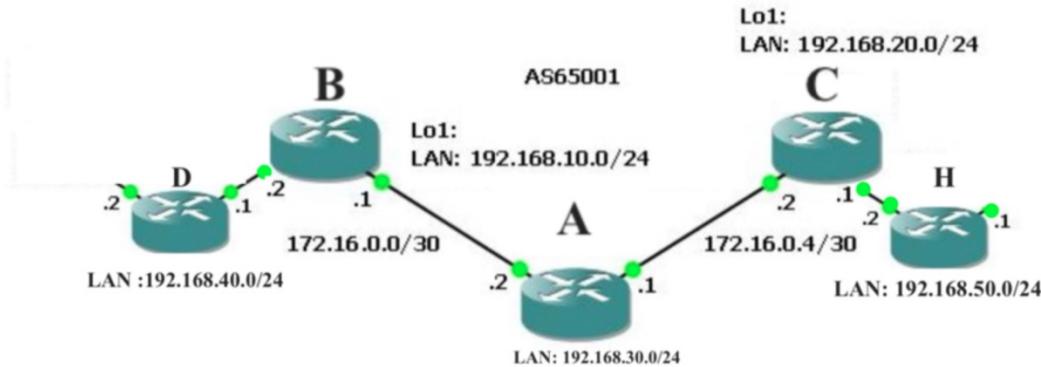
1. 1
2. 2
3. 3
4. 4

19. If link between A and B is broken, then metric from D to NTW_2 will change to What ?

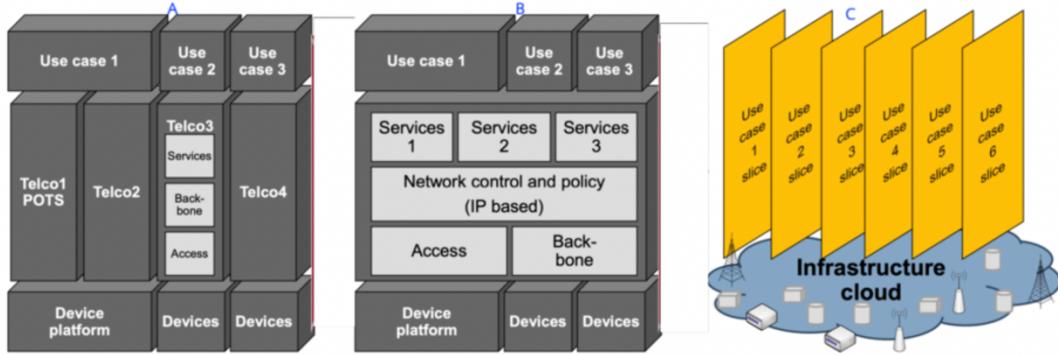
1. 1
2. 2
3. 3
4. 4

20. if Next Node for D to reach Network 2 is change from A to C from unknown reason, then the metric from host connected to D to host in Network 2 will change to what ?

1. 1
2. 2
3. 3
4. 4



21. AS65001 has 5 access networks on 5 different sites, which has distance between each site about 10 kilometers. MPLS service with constant bit rate is used as link between two adjacency sites. What is link protocol for subnet between A and B ?
- PPP
 - RIP
 - OSPF
 - SDH
22. If C is Area Border router to neighboring Area, What is routing protocol for sending packet to A ?
- PPP
 - RIP
 - OSPF
 - SDH
23. What is IP address for .2 of C ?
- 172.16.0.4
 - 172.16.0.5
 - 172.16.0.6
 - 172.16.0.8
24. If D has 16 subnets, which of the following is subnet in D ?
- 192.168.40.0/24
 - 192.168.40.0/26
 - 192.168.40.0/28
 - 192.168.40.0/32
25. During initialization of Dijkstra's Algorithm to find shortest path from 192.168.40.0/24 to 192.168.50.0/24, what is $D(v)$ for 192.168.30.0/24 ? Assume that each link has cost of 1 .
- 2
 - 3
 - 4
 - 5



26. Which of the following is SDN ?

1. A
2. B
3. C
4. Only Infrastructure cloud in C

27. Which of the following requires circuit switching ?

1. A
2. B
3. C
4. Only Infrastructure cloud in C

28. Which of the following requires routing protocols ?

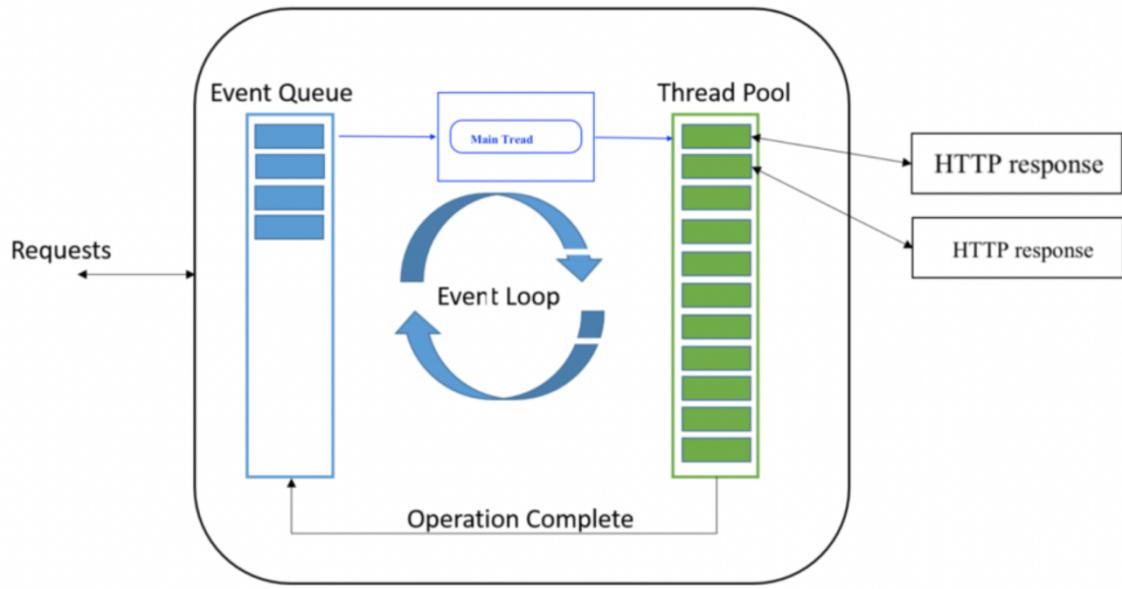
1. A
2. B
3. C
4. Only Infrastructure cloud in C

29. How many routing tables are there in B to support all use cases ?

1. 0
2. 1
3. 2
4. 3

30. How many routing tables are there in C to support all use cases ?

1. 0
2. 1
3. 2
4. 3



31. How many web browsers are browsing this server ?

1. 1
2. 2
3. 3
4. 4

32. What is the possible maximum number of browsing before server is overloading ?

1. 1
2. 2
3. 3
4. 4

33. Which of the following is not function of main tread ?

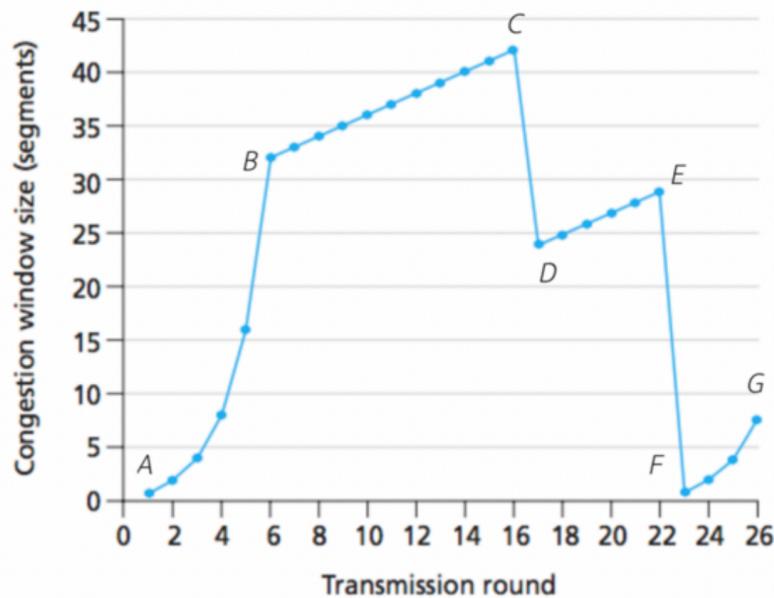
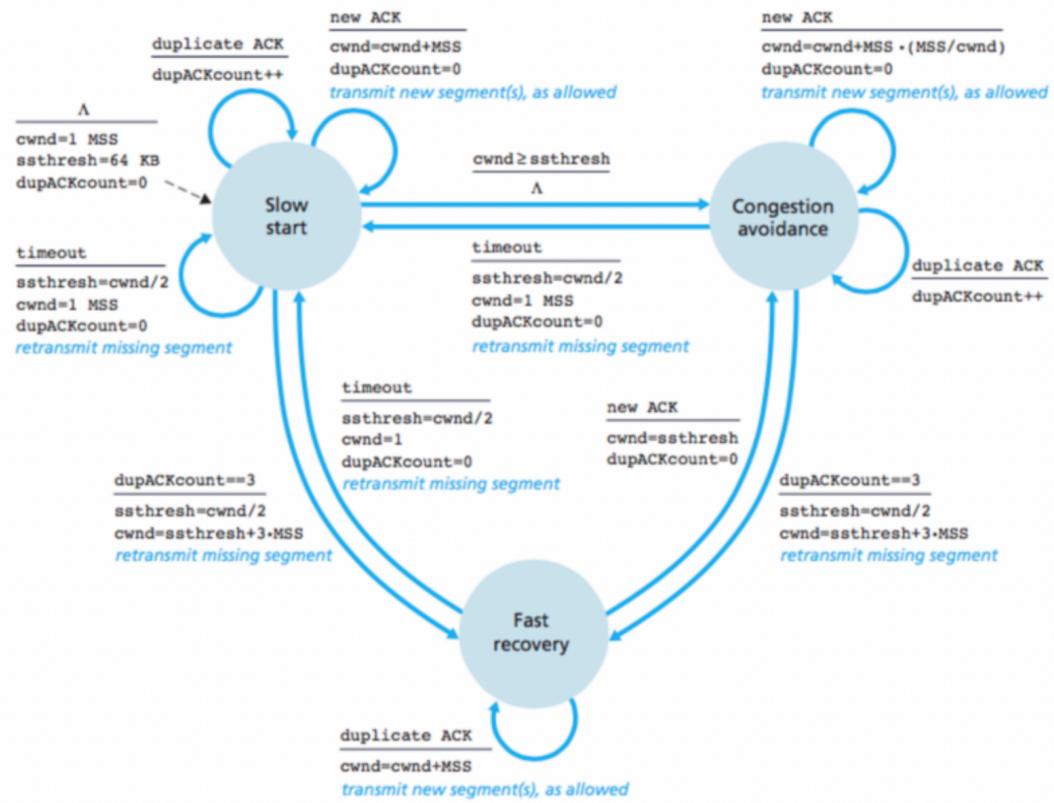
1. creation of new thread by main thread
2. web content fetching
3. processing script
4. updating of message queue

34. If web content has JSP script, what should main thread do ?

1. access the requested web page/content
2. process the script
3. response to the request by sending response message in html back to browser
4. send back applet

35. What should be done to allow more concurrent browsing ?

1. response with html. 5.0 message
2. increase size of Event Queue
3. create more threads in Thread Pool
4. upgrade to Web RTC



36. What is state during time between A and B ?

- 1. slow start
- 2. congestion avoidance
- 3. fast recovery
- 4. flow control

37. What is state during time between B and C ?

- 1. slow start
- 2. congestion avoidance
- 3. fast recovery
- 4. flow control

38. What is state during time between C and E ?

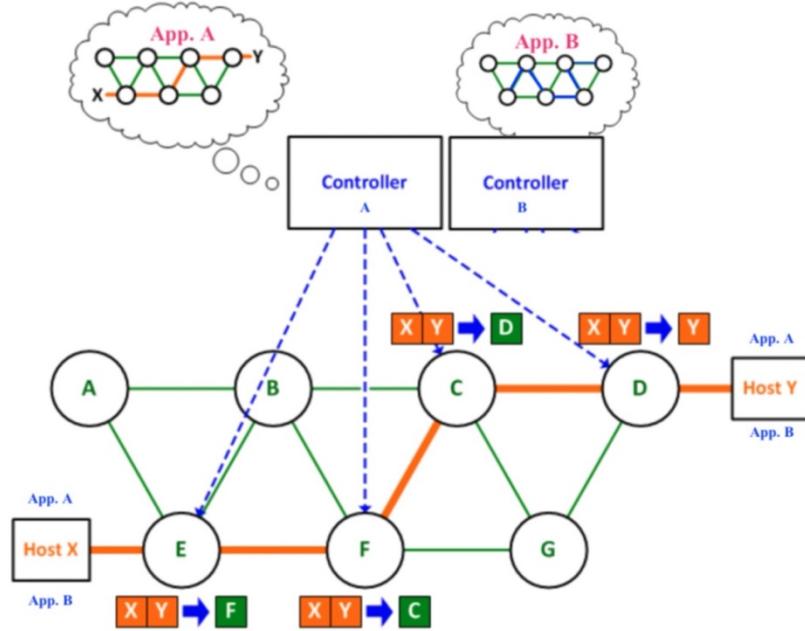
- 1. slow start
- 2. congestion avoidance
- 3. fast recovery
- 4. flow control

39. If congestion windows size at C = 42, what is ssthresh at D ?

- 1. 1
- 2. 2
- 3. 3
- 4. 4

40. If there are 3 or more duplicated ACK at time C , what is the next state ?

- 1. slow start
- 2. congestion avoidance
- 3. fast recovery
- 4. flow control



41. If routing of message of App. A on X to Y is through EFCD, routing of message of App. B on X to Y passes through what switches ?
1. EFCD
 2. EFGD
 3. EBCD
 4. EBFG
42. Why does E have different routing path for messages from App. A and App. B ?
1. netvisor
 2. flow visor
 3. server virtualization
 4. openflow
43. If ABCDEFG are MPLS switches, which of the following is true ?
1. there is no Controller B
 2. XY becomes XYlabel
 3. ABCDEFG have flowvisor
 4. E has both IP and MPLS protocols
44. For network in Figure 9, which of the following is true ?
1. Packet from App. A and App. B in Host X have the same IP source address
 2. B and F have different protocol for communication with Controller
 3. Link protocol between Host X and E is PPP
 4. This network is VLAN because App. A and App. B have different network slices.
45. Which of the following is not function of E ?
1. RIP
 2. OSPF
 3. iBGP
 4. eBGP

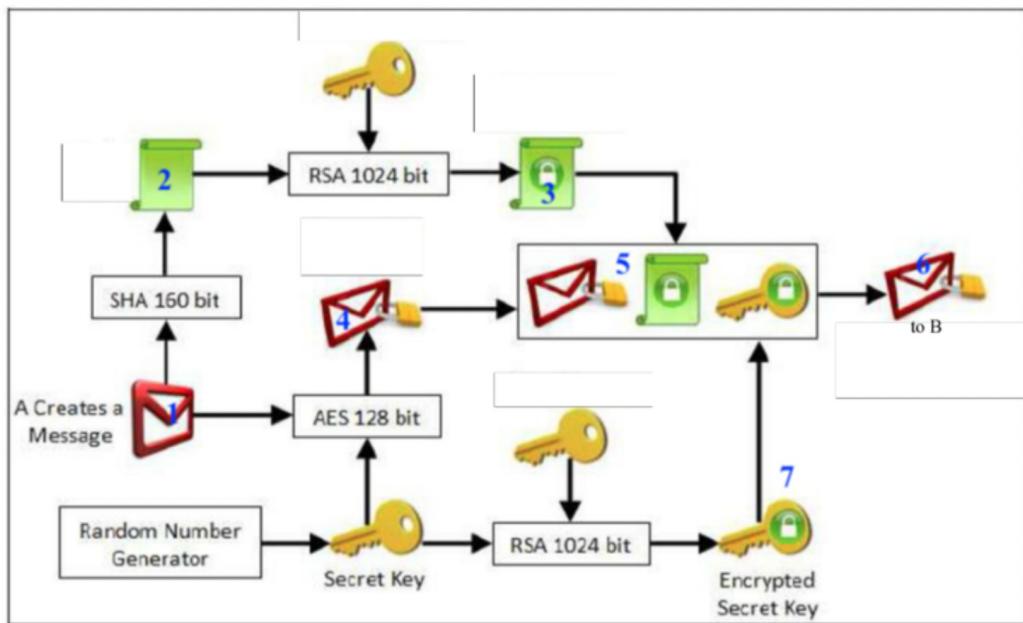


Fig. 10

46. If 1 is m , then What security does 2 have ?

1. confidential
2. integrity
3. authentication
4. non-repudiation

47. What security does 3 have ?

1. confidential
2. integrity
3. authentication
4. non-repudiation

48. If the Secret Key (generated from random number) is k_s and A is sender, B is receiver, what is 4 ?

1. $k^+_A(m)$
2. $k^-_A(m)$
3. $k^+_B(m)$
4. $k^-_B(m)$

49. If the Secret Key (generated from random number) is k_s , and A is sender, B is receiver, what is 5 ?

1. $k_s(k^+_B k^-_A(m))$
2. $k_s(k^+_B k^-_A(m))$
3. $k_s(k^-_B k^+_A(m))$
4. $k_s(k^-_B k^+_A(H(m)))$

50. If A found that certificate ($k^+_{\text{Certification Authority}}$ $k^-_{\text{Certification Authority}}$ (k^+_B)) is zero for some unknown reason, which of the following is not confidential (for A to send m to B)?

1. $k^+_A(m)$
2. $k^-_A(m)$
3. $k^+_B(m)$
4. $k^-_B(m)$