Quiz II
EE466/566: Advanced Computer Networking
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You have 60 minutes to complete the quiz with 30 points total.   Good luck.

Multiple choice questions: 1 point each

1)   Call admission is used

   a) To ensure that the requested QoS of the admitted flows are satisfied.
   b) Because of limited resources.
   c) To increase throughput efficiency.
   d) Both (a) and (b). X

2)   In an integrated service (IntServ) architecture, an arriving session declares its QoS requirements using

   a) S-Spec only
   b) R-Spec only X
   c) T-Spec only
   d) Both (b) and (c)

3)   Drawbacks of IntServ network is

   (a) Its lack of scalability
   (b) Its lack of flexibility
   (c) Both (a) and (b) X
   (d) None of the above

   4) In a DiffServ network,

   (a)   The core router is more complex than the edge router
   (b)   The edge router is more complex than the core router   X
   (c)   Both the edge and core routers have the same comlexity
   (d)   The core router is usually slower than than edge router.

5)   In a DiffServ network, marking is done at

(a)   The core router
(b)   The edge router X
(c)   Both edge and core routers
(d)   At the core and edge switches

6)   In a DiffServ network, marking is used to

(a) Differentiate different classes of traffic
(b) Speed up packet processing time at the core routers
(c) Both (a) and (b) X
(d) None of the above.

7) In a DiffServ network, shaping

(a) is used to drop non-conforming packets X
(b) is used to detect illegal traffic
(c) is used to mark packets
(d) none of the above

8)   IntServ network has

(a) Per aggregate isolation
(b) Per flow isolation X
(c) Long term connection setup
(d) None of the above

9) RSVP is used to

(a) Transmit R-Spec and T-Spec of an arriving session to the routers
(b) Set up the routing path between the sender and receiver.
(c) Both (a) and (b) X
(d) None of the above

10) Weighted fair queuing is typically

(a) Implemented at the edge routers
(b) Placed before the token bucket module.
(c) Both (a) and (b)
(d) Implemented at the core routers X

11)   Which of the followings is not a valid PHB?

(a) Class A gets x% of outgoing link bandwidth over time intervals of a specified length
(b) Class A packets leave first before packets from class B.
(c) Class A packets has lower loss rate than that of packets from class B.
(d) All are valid PHBs. X

12) In PATH Message in RSVP contains

(a) Multicast's address X
(b) Receiver's desired bandwidth.
(c) Filter Spec
(d) None of the above

13) The motivation for using multicast is

(a) To avoid bottleneck at the sender
(b) To avoid bottleneck at the receiver
(c) Better bandwidth utilization.
(d) Both (a) and (c). X

14) Which of the following is true about TFRC:

(a) TFRC has larger rate fluctuation than TCP.
(b) TFRC provides reliable retransmission
(c) TFRC has larger jitter than TCP.
(d) None of the above X

15) Using shorter window to estimate the loss rate tends to result in

(a) Larger fluctuation in sending rate for TFRC X
(b) Lower fluctuation in sending rate for TFRC
(c) Fluctuation in sending rate for TFRC remains the same.
(d) None of the above.

16) A system consisting of 2 token buckets cascading in series, each with depth b and bucket
rate r is equivalent to

(a) 1 token bucket with depth 2*b and rate r
(b) 1 token bucket with depth 2*b and rate 2*r
(c) 1 token bucket with depth b and rate 2*r
(d) None of the above   X

17) A public key contains

   (a) A single number.
   (b) A pair of prime numbers
   (c) A pair of relative prime number.
   (d) None of the above X

18) Which of the followings are true about a symmetric key encryption?

   (a) Slower than public key encryption
   (b) Uses a shared secret key   X
   (c) Typically used to encrypt message digests.
   (d) Both (b) and (c).

19) Nonce is typically used to

   (a) Verify message integrity
   (b) Authenticate the user X
   (c) Encrypt message.
   (d) Avoid the "man (woman) in the middle" attack.

20) MD5 is

   (a) A symmetric key encryption algorithm
   (b) A public key encryption algorithm.
   (c) Used in user authentication.
   (d) None of the above. X

21) **Ignore this question**
   (a) Slower than public key encryption
   (b) Uses a shared secret key
   (c) Typically used to encrypt message digests.
   (d) Both (b) and (c).

22) Key distribution center

   (a) Keeps all the secret keys that are shared among different pairs of registered users
   (b) Keeps the public keys of all the registered users.
   (c) Keeps the secret keys that are shared between itself and the registered users. X
   (d) None of the above.

23) Certification authority

(a) Keeps public keys of all the registered users
(b) Provides authentication of the receiver.
(c) Generates a session key for a pair of registered users
(d) Both (a) and (b) X

24) AH protocol is implemented at

(a) Network layer X
(b) Transport layer
(c) Application layer
(d) Physical layer.

25) The weaknesses in 802.11 WEP are

(a) Short IV field
(b) IV transmitted in plaintext.
(c) Both (a) and (b) X
(d) None of the above.

26) How many keys Alice has to use in order send an email to Bob using PGP? (PGP provides
     confidentiality, message integrity, and sender's authendication).

(a) 1
(b) 2
(c) 3 X
(d) 4

27) In SSL, the session key is typically generated by

(a) Web browers X
(b) Web servers
(c) CA
(d) KDC

28) Advantages of signature-based IDS are

(a) High false positive rates
(b) Fast X
(c) New attacks can be detected easily.
(d) None of the above

29) Bacterial

(a) Can infect other files.

(b) Triggered by some events
(c) Both (a) and (b)
(d) None of the above X

30) A Trojan Horses

(a) Can spread the infection to other files.
(b) Can replicate itself into multiple copies.
(c) Can change read/write permissions of other files. X
(d) All of the above