1. Two broad categories of congestion control are
   a) Open-loop and Closed-loop
   b) Open-control and Closed-control
   c) Active control and Passive control
   d) None of the mentioned
2. In open-loop control, policies are applied to _____
   a) Remove after congestion occurs
   b) Remove after sometime
   c) Prevent before congestion occurs
   d) Prevent before sending packets
3. In Go-Back-N window, when the timer of the packet times out, several packets have to be resent even some may have arrived safe. whereas in Selective Repeat window, tries to send _____
   a) Packet that have not lost
   b) Packet that have lost or corrupted
   c) Packet from starting
   d) All the packets

4. Discarding policy is mainly done by
   a) Sender
   b) Receiver
   c) Router
   d) Switch

5. 7. The technique in which a congested node stops receiving data from the immediate upstream node or nodes is called as
   a) Admission policy
   b) Backpressure
   c) Forward signalling
   d) Backward signalling
6. Backpressure technique can be applied only to
   a) Congestion networks
   b) Closed circuit networks
   c) Open circuit networks
   d) Virtual circuit networks
7. The packet sent by a node to the source to inform it of congestion is called
   a) Explicit
   b) Discard
   c) Choke
   d) Backpressure
8. In the slow-start algorithm, the size of the congestion window increases _____ until it reaches a threshold.
   a) Exponentially
   b) Additively
   c) Multiplicatively
   d) None of the mentioned

9. Effective bandwidth is bandwidth that network needs to allocate for the
    a) Flow of Data
    b) Flow of Cost
    c) Flow of Traffic
    d) Flow of Amount
10. In Congestion, CBR stands for

    a) Control Bit Rate
    b) Constant Bit Rate
    c) Constant Byte Rate
    d) Congestion Byte Rate

11. There is no communication between congested node or nodes and source in the

    a) Implicit Signaling
    b) Explicit Signaling
    c) Forward Signaling
    d) Backward Signaling

12. Which one of following is not used for congestion control
    a) Traffic aware routing
    b) Admission control
    c) Load shedding
    d) All of above
13. In the _____ traffic model, the data rate changes suddenly in a very short time.
    a) Constant bit rate
    b) Variable bit rate
    c) Bursty
    d) None of the above
14. In the _____ method, the signal is included in the packets that carry data.
    a) Backpressure
    b) Choke packet
    c) Implicit signalling
    d) Explicit signalling
15. Leaky bucket algorithm shapes bursty traffic into fixed –rate traffic by averaging the .....
    a) Data rate
    b) Average rate
    c) Traffic rate
    d) Traffic shaping

For a host machine that uses the token bucket algorithm for congestion control, the token bucket has a capacity of 1 mega byte and the maximum output rate is 20 mega bytes per second. Tokens arrive at a rate to sustain output at a rate of 10 mega bytes per second. The token bucket is currently 25% full and the machine needs to send 12 mega bytes of data. If the system is initially idle for 2 seconds, then the minimum time required to transmit the data is _____ seconds.