

**B.TECH. DEGREE EXAMINATIONS: APRIL / MAY 2010**

Sixth Semester

**INFORMATION TECHNOLOGY**

U07IT602: High Performance Networks

**Time: Three Hours**

**Maximum Marks: 100**

**Answer ALL the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. The technique used to determine the random amount of waiting time after collision in Ethernet is
  - a. Random backoff
  - b. Binary exponential backoff
  - c. Linear backoff
  - d. Logarithmic backoff
2. Which of the following is not the property of ATM?
  - a. Variable size cells
  - b. higher data rate
  - c. Streamlined
  - d. Flow control
3. The notation used for queuing model is
  - a. Quintal notation
  - b. Kendall's notation
  - c. Amdhal's notation
  - d. Lamda notation
4. \_\_\_\_\_ is used to smooth out a traffic flow and to reduce cell clumping.
  - a. Traffic policing
  - b. Traffic monitoring
  - c. Traffic shaping
  - d. Traffic regulating
5. UBR service is
  - a. Unspecified Bit Rate
  - b. Unified Bit Rate
  - c. Uninterrupted Bit Rate
  - d. United Bit Rate
6. The rule for selective drop is based on the condition
  - a.  $(N==R) \text{ OR } W(i) > Z$
  - b.  $(N > R) \text{ AND } W(i) < Z$
  - c.  $(N < R) \text{ AND } W(i) > Z$
  - d.  $(N > R) \text{ AND } W(i) > Z$
7. Which of the following is not the background function of ISA
  - a. Reservation Protocol
  - b. Admission Control
  - c. Management Agent
  - d. QOS queuing
8. Shorter packets are favored in
  - a. Processor Sharing
  - b. Fair queuing
  - c. FIFO queuing
  - d. BRFQ
9. Which of the following is not a function of RTCP?
  - a. QOS & congestion control
  - b. Session size estimation & scaling
  - c. Session control
  - d. Routing

10. \_\_\_\_\_ is an effort to provide traffic management, QOS support and to speed up IP network.
- a. MPLS                      b. RSVP                      c. WFQ                      d. RTP

**PART B (10 x 2 = 20 Marks)**

11. What is jitter?
12. Differentiate fast Ethernet from Gigabit Ethernet.
13. What are the traffic control functions?
14. What does M/M/1 denote?
15. When an ATM cell is transmitted over a network with the data rate of 150 Mbps. How long will it take to insert a cell onto the network.
16. What is the significance of traffic descriptors?
17. Differentiate between elastic and inelastic network traffic.
18. What is Random Early Detection?
19. How a session is defined in RTP?
20. Give MPLS label format.

**PART C (5 x 14 = 70 Marks)**

21. (a) Discuss in detail about ATM Adaptation layer.

**(OR)**

- (b) Briefly explain about frame relay networks.

22. (a) Discuss in detail about the single server queuing architecture, the basic queuing relationships and the model characteristics.

**(OR)**

- (b) What are the various ways in which congestion is controlled? Explain.

23. (a) Discuss briefly about ABR traffic management.

**(OR)**

- (b) Explain clearly the ATM traffic control functions to avoid congestion.

24. (a) Discuss in detail about differentiated services architecture.

**(OR)**

(b) (i) Briefly explain Random early detection algorithm. (9)

(ii) Write a brief note on Weighted Fair Queuing. (5)

25. (a) (i) Discuss briefly about Real Time Protocol. (5)

(ii) Explain MPLS operation in detail. (9)

**(OR)**

(b) (i) What is label stacking? Explain. (7)

(ii) Explain about RSVP operation. (7)

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