

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

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Week 5

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Week 7

Week 8

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Week 10

Week 11

Lecture 52 : Bounded Access Protocols for LANs

Lecture 53 : Performance Comparison & QoS Framework

Lecture 54 : Routing & Resource Reservation

Lecture 55 : Rate Control

Lecture 56 : QoS Models & Soft Real-Time Communication in a LAN

Lecture Materials

Quiz: Week 11 : Assignment 11

Feedback Form of Week 11

Week 12

Assignments Solution

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Week 11 : Assignment 11

The due date for submitting this assignment has passed.

Due on 2021-10-13, 23:59 IST.

As per our records you have not submitted this assignment.

1) Which of the following protocols are examples of bounded access protocols?

1 point

- Countdown Protocol
- Virtual Time Protocol
- IEEE 802.5
- IEEE 802.4
- RETHET
- Window-Based Protocol

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.
- ☐ f.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

e.

2) Suppose in a RETHER, the mean target token rotation time (TTRT) is 50 seconds and the mean token holding time for Node N_i is 40 seconds. Then what is the value of the TimetoDeadline field tagged with the token?

1 point

- 5seconds
- 10seconds
- 20seconds
- 40 seconds
- 50seconds

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

3) If utilization (U) is lower than ABU (Absolute Breakdown Utilization), what will be the value of Guarantee Probability (GP(U))?

1 point

- GP (U) will be close to -1.
- GP (U) will be close to 0.
- GP (U) will be close to 1.
- GP (U) will be close to infinity.
- None of these

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

4) A connection satisfies which of the following models if the inter-arrival time between two packets is always less than X_{min} , and size of the largest packet does not exceed S_{max} ?

1 point

- (X_{min}, S_{max}) model
- (r, T) model
- $(X_{min}, X_{avg}, S_{max}, I)$ model
- (σ, ρ) model
- Hybrid model

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

5) Complexity of QoS algorithms depends on which of the following constraints?

1 point

- Hop count
- Delay
- Bandwidth
- Delay-jitter
- All of these

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

e.

6) Let $d(i, j)$ denote the chosen constraint for link (i, j) , and for any path $P = (i, j, \dots, l, m)$, $d(P) = \min\{d(i, j), d(j, k), \dots, d(l, m)\}$.

This is an example of which of the following constraints?

1 point

- Additive Constraint
- Multiplicative Constraint
- Concave Constraint
- Distributive constraint
- Cumulative constraint

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

7) Suppose, r is the token generation rate in Token bucket with leaky rate control. Then, the maximum number of packets that can enter a network in any interval of time t is given by which of the following expressions?

1 point

- $r \cdot t + b$ (b is a constant)
- $r \cdot t + b$ (b is a constant)
- $r \cdot t + b$ (b is a constant)
- $r \cdot t + b$ (b is a constant)
- $r \cdot t + b$ (b is a constant)

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

8) Which one of the following elements represents the mechanism used to schedule the incoming packets for transmission?

1 point

- Call admission control
- Rate Control
- Service discipline
- QoS renegotiation
- All of these

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

9) Which of the following describe the aim of traffic distortion handling?

1 point

- Modify the input traffic by reconstructing to its original characteristics.
- Derive new traffic characteristics at the entrance to a switch.
- Reconstruct the traffic to its original characteristics at every switch.
- All of these

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

10) Which of the following are examples of Work Conserving Discipline?

1 point

- WFQ
- Delay-EDD
- Jitter-EDD
- Stop-and-Go
- RCSP

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

b.

11) Which of the following QoS models should be used for extending the features of common Internet protocols such as IP?

1 point

- Integrated Services (IntServ)
- Differentiated Services (DiffServ)
- Multi-Protocol Label Switching (MPLS)
- All of these

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

12) Which of the following are limitations of IntServ?

1 point

- The amount of state information increases proportionally with the number of flows.
- Incurs huge overhead on storage and processing on the routers.
- Routers also have to implement RSVP, admission control, packet classification, etc.
- Ubiquitous deployment of IntServ is required for guaranteed service.
- Incremental deployment of IntServ is difficult.
- All of these.

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.
- ☐ f.

No, the answer is incorrect.

Score: 0

Accepted Answers:

f.