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10CS/IS64

Sixth Semester B.E. Degree Examination, July/August 2021
Computer Networks – II

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

1 a. Distinguish between connectionless packet switching and virtual circuit packet switching. **(08 Marks)**

b. With the help of a diagram, explain briefly the structure of a generic switch. **(08 Marks)**

c. Differentiate between connection oriented service and connectionless service. **(04 Marks)**

2 a. Define routing algorithm, explain the Bellman – Ford algorithm with an example. **(10 Marks)**

b. Explain the leaky bucket algorithm for policing the traffic at flow level. How does taken leaky bucket traffic shaper differs from leaky bucket algorithm. **(10 Marks)**

3 a. Describe the various field of IPV_4 header. **(10 Marks)**

b. Explain the IP address classification with examples. **(05 Marks)**

c. What is subnet addressing? Explain with an example. **(05 Marks)**

4 a. With a neat diagram, discuss the TCP segment header format. **(08 Marks)**

b. Explain the TCP 3-way handshake for establishing a TCP connection. **(06 Marks)**

c. What are the types of Internet routing Protocols? Explain working of Routing Information Protocol (RIP). **(06 Marks)**

5 a. Define Network Management and explain SNMP and SNMP messages. **(08 Marks)**

b. Differentiate between DES and RSA. **(06 Marks)**

c. Explain DNS and DNS Message format. **(06Marks)**

6 a. What is VPN? What are its types? List the benefits of creating VPN. **(06 Marks)**

b. What is an MPLS network? Explain the process of packet forwarding using MPLS. **(08 Marks)**

c. Explain with a neat, sketch the differential services QoS. **(06 Marks)**

7 a. Briefly discuss the MPEG standards and frame type for compression. **(06 Marks)**

b. Explain H.323 components with a neat sketches. List the steps involved in signaling. **(08 Marks)**

c. Discuss in brief the working of Real Time Transport Protocol (RTP). **(06 Marks)**

8 a. What are the classification of Routing Protocols in Ad – Hoc Networks. Discuss the following protocol i) DSDV ii) DSR protocol. **(10 Marks)**

b. What are the different clustering techniques in wireless sensor Networks. Discuss briefly. **(04 Marks)**

c. With a neat sketch, discuss the sensor node structure. **(06 Marks)**

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