

December 2023

B. Tech (EEIOT) 5th Sem., ~~December 2023~~

Computer Networks (EC-602)

Time: 90 Minutes

Max. Marks:75

- Instructions:**
1. It is compulsory to answer all the questions (1 marks each) of Part -A in short.
 2. Answer any three questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.

PART -A

- Q1(a) Which is more secured HTTP or HTTPS and why (1.5)
 (b) How many hosts are there in Class B IP addressing scheme. (1.5)
 (c) For small size messages which protocol is used: TCP or UDP (1.5)
 (d) Differentiate between explicit and implicit congestion control techniques (1.5)
 (e) Give names of parameters for QoS (1.5)
 (f) Name two mechanisms of closed loop congestion control mechanisms (1.5)
 (g) Define two node loop instability problem (1.5)
 (h) If the value of HLEN in binary for TCP packet is '1100' then tell how many extra header bytes are used. (1.5)
 (i) Prove that the channel capacity is equal to bandwidth when SNR is unity. (1.5)
 (j) Name three phases of TCP congestion control (1.5)

PART -B

- Q2(a) Explain OSI 7 layer model in detail (10)
 (b) Explain how Email is secured. (5)
- Q3(a) Differentiate circuit switching in detail with all the phases with the help of a circuit switched network. (10)
 (b) Differentiate between TDM and FDM in detail. (5)
- Q4 Explain flow chart of slotted ALOHA. A slotted Aloha network transmits 400 bit frames on a shared channel of 4000 Kbps. What is the throughput of the system if there are 100 nodes and one system produces 1000 frames/sec. Also give three major differences of pure and slotted ALOHA (15)
- Q5(a) Explain Distance vector routing in detail with the help of an example network. (10)
 (b) Explain various classes of IP addressing in detail (5)
- Q6(a) Explain Token bucket algorithm for flow control in detail (10)
 (b) Differentiate between fair queuing and weighted fair queuing strategies (5)
- Q7 Write short note on the following (15)
- TELNET
 - FTP

017503/100/111/514