

# END TERM EXAMINATION

SIXTH SEMESTER [B.TECH] MAY- JUNE 2016

Paper Code: ETCS-306

Subject: Computer Networks

Time: 3 Hours

Maximum Marks: 75

Note: Attempt any five questions including Q.No1 which is compulsory.

- Q1 Attempt all:
- (a) Differentiate between circuit switching, packet switching and message switching. (5)
  - (b) Differentiate between adaptive and non-adaptive routing algorithms. (5)
  - (c) Explain parity bit error detection method in detail. (5)
  - (d) Differentiate between narrowband ISDN, broadband ISDN (5)
  - (e) Explain Subnetting using an example. (5)
- Q2
- (a) Compute the CRC for a 10-bit sequence 1010011110 and a divisor of 1011. (6)
  - (b) Give the header format of ATM Cell. Also explain the semantics of each field in the header. (6.5)
- Q3 Explain Channel allocation problem and its solution algorithm in detail. Provide an example to illustrate the problem and its solution. (12.5)
- Q4
- (a) Discuss the various issues in designing Data link layer in detail. (6)
  - (b) Explain sliding window protocol in detail and using an example. (6.5)
- Q5 Explain the following cables in detail.
- (a) Baseband Coaxial Cable (4)
  - (b) Broadband Coaxial cable (4)
  - (c) Fiber cable (4.5)
- Q6 Explain the network layer in the internet and the network layer in ATM networks in detail. Differentiate in between these two:- (12.5)
- Q7 A router has the following (CIDR) entries in its routing table-
- |                |             |
|----------------|-------------|
| Address/Mask   | Next Hop    |
| 135.46.56.0/22 | interface 0 |
| 135.46.60.0/22 | interface 1 |
| 135.53.40.0/22 | Router 1    |
| Default        | Router 2    |
- For each of the following IP addresses, what does the router do if a packet with that address arrives? (12.5)
- (i) 135.46.63.10
  - (ii) 135.46.57.14
  - (iii) 135.46.52.2
  - (iv) 192.53.40.7
  - (v) 192.53.56.7
- Q8 Write short notes on **any two** of the following: - (6.25x2=12.5)
- (a) Domain Name Registration & Registrars
  - (b) Satellite networks
  - (c) Network devices

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