

29 + 2 = 31.

May 2018

SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No.: 

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Total number of pages: [2]  
Total number of questions = 6

**B.Tech.-Electronics and Communication Engg. (Semester-4th)**

**Computer Networks**

Subject code: BTEC-413A

Paper ID: [ ]

Batch: 2015 onwards

Regular / Reappear.

Time allowed: 3 Hrs.

Max. Marks: 60

**Important Instructions:**

- All questions are compulsory.
- Assume any missing data.

**PART A (10 x 2 marks)**

- Q. 1. (a) Define Bit rate and Baud rate.  
(b) What is the difference between http and https?  
(c) Define throughput and Jitter.  
(d) How does one bit error differ from burst error?  
(e) Define Extranet.  
(f) What is MAC address?  
(g) What is HTTP?  
(h) "IP is connectionless unreliable protocol". Justify this statement.  
(i) State Optimality Principle.  
(j) What is the function of ARP?

**PART B (5 x 8 marks)**

- Q. 2. What are the goals of computer networks? Discuss its applications in brief. CO1  
**OR**  
Compare (i) Wired and Wireless Networks (ii) LAN and WAN, in detail. CO1
- Q. 3. What are the reasons for using layered protocols? Compare Star and Mesh topology in terms of the links, cabling, resources required and installation and reconfiguration. CO1+CO2  
**OR**  
Distinguish between node to node delivery, source to destination delivery and process to process delivery? Discuss the role of layers and protocols responsible for the three types of data delivery. CO1+CO2

P.T.O.

Q. 4. Explain pure-ALOHA and slotted-ALOHA systems. Give the expression for throughput for each, clearly explaining the various terms. CO2

OR

Distinguish between Go-back-N ARQ protocol and Selective repeat ARQ. CO2

Q. 5. (a) Discuss various design issues of network layer? Compare broadcasting and Multicasting. CO3  
(b) What is IP addressing? Discuss the format of IP datagram format and explain the function of each field of format.

OR

(a) Compare bit oriented and byte oriented protocols of framing. CO3  
(b) Discuss the frame format of HDLC protocol in detail.

Q.6. Write short note on CO4  
(i) TELNET (ii) HTTP

OR

Contrast link state and distance vector routing protocols, giving an example of each. CO4

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