

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

MAKEUP EXAMINATION- 2016

B.Tech VI Semester

COURSE CODE: 10B11EC 611

MAX. MARKS: 25

COURSE NAME: TELECOMMUNICATION NETWORK

COURSE CREDITS: 4

MAX. TIME: 1Hr 30 Min

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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**Q1. a)** Derive the expression for the maximum throughput of ALOHA and show that maximum throughput is 18%. (3)

b) In CSMA technique, how the medium is accessed between various nodes (2)

**Q2. a)** Explain the working of 3 bit sliding window protocol with suitable example. (3)

b) What is the difference between network layer delivery and transport layer delivery? (2)

**Q3.** Differentiate between (i) message switching, packet switching and circuit switching (ii) OSI layer protocol and transport layer protocol. (5)

**Q4.** Explain and draw the flow diagram of Stop-and -Wait ARQ for: Frame 0 normally acknowledged, Frame 1 lost and for next frame 0 delayed acknowledgements was received. (5)

**Q5.** What are the basic functions of the data link layer? Write down the basic features of HDLC protocol? Could HDLC be used as a data link protocol for a LAN? Justify your answer. (5)