

**B. Tech. Sem -VII (E & TC Engg.) (2014 COURSE) (CBCS) :  
WINTER - 2018**

**SUBJECT: COMPUTER NETWORKS**

Day: Friday  
Date: 23/11/2018

**W-2018-2596**

Time: 02.30 PM TO 05.30 PM  
Max. Marks: 60

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks
  - 3) Draw neat diagram **WHEREVER** necessary.
  - 4) Assume suitable data, if necessary.
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**Q.1** Explain the functionality of edge network and network core. What are the devices used and the facilities in edge network and network core? (10)

**OR**

State and explain in detail different types of network hardware used in computer networks. (10)

**Q.2** Explain different types of high speed digital access and state differences between hubs, bridges, switches, routers. (10)

**OR**

Explain the functionality and usage of bridges and what is spanning tree. Explain Ethernet, Giga Ethernet, Ethernet Mac sub layer, data link layer switching. (10)

**Q.3** With a neat diagram explain multiplexing and de – multiplexing. State its differences. What is connectionless transport (UDP)? (10)

**OR**

State different protocols used in data link layer. Explain elementary data link layer protocol and sliding window protocol. (10)

**Q.4** With a neat diagram explain virtual and datagram networks. Explain its differences. (10)

**OR**

What is congestion? Explain congestion generation and control algorithm. (10)

**Q.5** Discuss connection establishment and release TCP. What is TCP connection management modeling? (10)

**OR**

Explain the functionality of Application layer and its paradigm. (10)

**Q.6 a)** Explain Cryptography algorithms and trust models in details. (10)

**OR**

**b)** Explain symmetric – key algorithms, Data Encryption Standard (DES), Advanced Encryption Standard (AES). (10)

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