

B.TECH. SEM -VII ELECTRONICS 2014 COURSE (CBCS) :
WINTER - 2017

SUBJECT: COMPUTER NETWORKS

Day : **Friday**
Date : **12/01/2018**

W-2017-2294

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

N.B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagram **WHEREVER** necessary.
- 4) Assume suitable data, if necessary.

- Q. 1** a) Explain with neat diagram a seven layered protocol stack. (07)
b) Write uses of computer networks. (03)

OR

- a) Enlist and discuss various design layer issues. (05)
- b) Explain different key factors in communication network evaluation. (05)

- Q. 2** Briefly describe limitations and applications of following types of media: (10)
- | | | |
|-----------------|-------------------------|----------------|
| i) Twisted pair | ii) Co – axial | iii) Microwave |
| iv) Satellite | iv) Fiber – optic cable | |

OR

- a) Explain Gigabit Ethernet system and its requirement in detail. (07)
- b) Write a short note on network connectors. (03)

- Q. 3** In what situation sliding window protocol performs better than stop and wait protocol. Explain (10)

OR

- a) Describe HDLC protocol with the importance of control fields. (05)
- b) Explain various IEEE 802 standards for LAN. (05)

- Q. 4** a) Describe distance vector routing algorithm. (05)
b) Explain token bucket algorithm. (05)

OR

- a) Explain the link state protocol known as OSPF and explain how it copes with routing inside a large and complex autonomous system. (06)
- b) Briefly describe the RSVP. (04)

- Q. 5** a) What is TCP and UDP and explain how you will choose between TCP and UDP? Compare them. (06)
b) Explain DHCP working. (04)

OR

- a) Briefly discuss the following terms (06)
 - i) DNS
 - ii) Mail server
- b) Explain TCP congestion control. (04)

- Q. 6** a) What is authentication header? Give the format of the IPSec authentication header? (06)
b) State and explain the principles of public key cryptography. (04)

OR

- a) How AES is used for encryption/decryption? Discuss with the example. (07)
- b) Write a short note on firewall. (03)

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