EVENING

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Uni. Roll No. .....

Program/ Course: B.Tech. (Sem. 3)
Name of Subject: Data Communication and Computer Networks
Subject Code: PCIT-103
Paper ID: 16043

**Time Allowed: 3 Hours** **Max. Marks: 60**

**NOTE:**

1) Part-A and B are compulsory
2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
3) Any missing data may be assumed appropriately

**Section – A** **[Marks: 02 each]**

**Q1.**

a) List the different applications of computer networks?
b) Define Multiplexing.
c) What is www?
d) What is subnetting?
e) Calculate the capacity of the channel having bandwidth of 10Hz and signal to noise ratio of 100 dB?
f) Differentiate between persistent and non-persistent CSMA.

**Section – B** **[Marks: 04 each]**

**Q2.** Generate the hamming code for 10010.

**Q3.** Write a short note on DNS.

**Q4.** Explain the working of sliding window flow control with the help of labeled diagram.

**Q5.** How throughput is improved in slotted ALOHA over pure ALOHA?

**Q6.** Compare TCP with UDP protocol.

**Q7.** Discuss frequency division multiplexing.

**Section – C** **[Marks: 12 each]**

**Q8.** Evaluate the distance vector routing algorithm using suitable example.

**OR**

Evaluate the Link State Routing algorithm using suitable example.

**Q9.** Explain the working of OSI model using labeled diagram.

**OR**

Explain the working of TCP/IP model using labeled diagram.

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