B

B.Tech. Degree IV Semester Examination April 2014

IT 1406 DATA AND COMPUTER NETWORKING
(*2012 Scheme*)

Time : 3 Hours   Maximum Marks : 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

I. (a) Draw the general block diagram of communication models and explain key elements.

(b) Write a note on pulse code modulation with a neat block diagram.

(c) Draw and explain the ATM protocol architecture.

(d) Why is CDMA preferred for cellular networks?

(e) Compare IEEE 802 protocol layers with OSI model.

(f) Differentiate slotted ALOHA and pure ALOHA.

(g) Explain IPV4 data gram format.

(h) Differentiate distance vector routing and link state routing.

PART B

(4 × 15 = 60)

II. (a) Describe various transmission media with diagrams.   (10)

(b) Describe various types of transmission impairments   (5)

OR

III. Explain different signal encoding formats with the help of figures.   (15)

IV. Explain different technologies used in wide areas switched networks.   (15)

OR

V. (a) Explain congestion control techniques   (8)

(b) Explain different routing strategies in packet switching networks.   (7)

VI. (a) Explain IEEE 802.11 architecture and services.   (10)

(b) Explain various LAN topologies.   (5)

OR

VII. (a) Describe Layer 2 and Layer 3 switches, with the help of diagrams.   (8)

(b) Write a note on Bridges.   (7)

VIII. (a) Explain TCP connection establishment and termination with state diagram.   (8)

(b) Draw and explain IPV6 protocol data unit.   (7)

OR

IX. Explain different routing protocols.   (15)

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