

FACULTY OF ENGINEERING

B.E. 2/4 (CSE) II – Semester (Main) Examination, May 2013

Subject: Data Communications

Time: 3 Hours

Max.Marks: 75

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

1. What is communication model? (3)
2. What are the advantages of digital transmission over analog transmission? (3)
3. Define jitter? (2)
4. What is piggy backing? Explain. (2)
5. What are the advantages of sliding-window flow control compared to stop-wait flow control? (2)
6. Differentiate between statistical time division multiplexer and synchronous time division multiplexer. (3)
7. List some basic functions performed at the MAC layer. (2)
8. What are the various ways of interfacing? (2)
9. What is frequency modulation? Represent it with a wave form. (3)
10. What is the maximum bit rate of a noiseless channel transmitting a signal with 4 levels and with a bandwidth of 3000 Hz? (3)

PART – B (50 Marks)

- 11.(a) Explain about TCP/IP layers.
(b) List and explain transmission impairments.
- 12.(a) Distinguish between synchronous and asynchronous transmission.
(b) Explain HDLC frame structure.
- 13.(a) Differentiate between circuit switching and packet switching techniques.
(b) Explain LAN protocol architecture.
- 14.(a) Explain in detail about ATM cell format.
(b) Discuss the third generation systems of cellular wireless networks.
- 15.(a) What is digital to digital encoding? Explain in detail about any 3 of its encoding schemes.
(b) Write about IEEE 802.11 architecture.
- 16.(a) Write about layer 2 and layer 3 switches.
(b) Explain any two collision free LAN protocols.
17. Write short notes on:
 - a) X.25
 - b) Error control in data link layer
 - c) Bluetooth architecture
