**Code No: IT14214**

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (Autonomous)**

**BE (IT) II Yr I Sem (Main) Examination Dec 2014/Jan 2015**

**DATA COMMUNICATIONS**

**Time: 3 Hours Max Marks:75**

**Note:** Answer all questions from **Section-A** at one place in the same order

Answer any **five** questions from **Section-B**

**SECTION - A (25 Marks)**

1. Discuss the key elements of the communication model (2)
2. Compare circuit switching and packet switching (2)
3. Discuss about stop and wait protocol (2)
4. State the features of CDMA (2)
5. Write a note on Shannon Capacity (2)
6. Explain the synchronous data communication with relevant example (3)
7. What do you understand by Medium Access Control (3)
8. What is the use of Bit Stuffing in data (3)
9. Compare the Virtual Circuit and Datagram subnets (3)
10. What are the advantages of FDDI over a basic Token Ring (3)

**SECTION - B (50 Marks)**

11. (a) Discuss the advantages of optical fiber over twisted-pair and coaxial cable (4)

(b) Explain TCP/IP protocol architecture and operation of TCP and IP protocols (6)

12. (a) Which of the four digital to analog conversion techniques (ASK, FSK PSK or QAM)

is the most susceptible to noise? Defend your answer (5)

(b) What is a CRC? Classify the errors that a CRC method will always detect and

will not detect (5)

13. (a) Distinguish between synchronous and statistical TDM (5) (b) Define FHSS and explain how it achieves bandwidth spreading (5)

14. (a) Explain the concepts of Circuit switching, virtual Packet switching and Data gram

packet switching with the help of event time diagrams (6)

(b) Write short notes on Frame Relay (4)

15. (a) Discuss about Switched, Fast and Gigabit Ethernets (4)

(b) Expalin the architecture of IEEE 802.11 in detail (6)

16. (a) Explain HDLC in detail with neat diagrams state the importance of HDLC (6)

(b) Discuss ADSL & XDSL in detail (4)

17. Write short notes on the following

(a) Transmission impairments (4)

(b) Line interfacing (3)

(c) LAN & Wirelessa LAN (3)