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B.E./B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2011
 ELECTRICAL AND ELECTRONICS ENGINEERING BRANCH
 FOURTH SEMESTER

EC 293 – COMMUNICATION ENGINEERING
 (REGULATIONS 2004)

Duration: 3 Hours

Max.marks: 100

Answer ALL questions

PART-A

(10x2=20Marks)

1. Compare periodic and aperiodic signals.
2. List the benefits of frequency modulation.
3. Write the types of transmission lines.
4. What is the relation between critical frequency and MUF?
5. Write the sampling theorem.
6. What does the front end of the radio receiver contain?
7. What are modems?
8. List the merits of ISDN.
9. Define look angle.
10. Write the principle used for guiding light beam within the optical fiber.

PART-B

(5x16=80 Marks)

- 11.(i) With a neat block diagram, explain the various blocks of a super heterodyne receiver. (10)
- (ii) Discuss the concept of FDM. (6)
- 12.(a) Discuss how impedance matching over a narrow band of frequencies is accomplished. (16)
- OR**
- 12.(b) Explain the features of ground wave and space wave propagations. (16)
- 13.(a) Describe the working of a FSK modulator and demodulator and compute the bit error probability. (16)
- OR**
- 13.(b) (i) Explain the various modules of a pulse code modulation system. (8)
- (ii) Discuss the digital T- carrier system. (8)
- 14.(a) Explain the following:
 - (i) Error control codes. (8)
 - (ii) Local Area Networks. (8)
- OR**
- 14.(b) Explain the seven layered architecture of OSI-ISO layers with their functions. (16)
- 15.(a) How is the location of a satellite tracked from the earth station? Derive the satellite link equations and list the benefits of satellite communication systems. (16)
- OR**
- 15.(b) Explain the essential components required for establishing an optical link and the various losses associated with it. List the merits and demerits of optical communication systems. (16)
