

B.E./B.Tech. DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2011

Information Technology

Fourth Semester (Regulations – 2008)

EC9212 – Communication Techniques

Time: 3 hrs

Max. Marks : 100

Answer ALL Questions

Part-A (10x2=20 Marks)

1. Write the advantages of frequency modulation over amplitude modulation.
2. What is meant by vestigial side band modulation?
3. State low pass sampling theorem.
4. What is the standard bit rate in PCM?
5. Write the observation from eye pattern.
6. What is meant by noncoherent detection?
7. Define information in terms of uncertainty.
8. List the features of cyclic codes.
9. State balance property of maximum length sequence.
10. What is meant by multiple access technique?

Part-B (5x16=80 Marks)

11. (i) What is the need of superheterodyne receiver? Explain each block in a superheterodyne receiver. (12)
 - (ii) Write notes on narrow band FM and wide band FM. (4)
 12. (a) Explain the principle of Delta modulation. List its drawbacks and explain how the drawbacks are overcome by Adaptive Delta modulation. (16)
- (OR)
12. (b) Discuss the principle of FDM and TDM. List the drawbacks of each scheme. (16)

Or

- 12b.i. What are the procedural and non procedural languages? (6)
ii. Justify the need of embedded SQL. Consider the relation student (stno, name, mark, and grade). Write embedded dynamic SQL statements in C language to retrieve all the students' records whose mark is more than 90. (10)

- 13a. i. Define the following with suitable example
1. Functional dependency (4)
 2. Entity integrity (6)
 3. Referential integrity (6)

Or

- b. Explain the normalization process using multi valued dependencies and using join dependencies.
- 14a. Explain the catalog information for cost estimation for selection and sorting operation in database.

Or

- b. Describe lock based protocol and time stamp based protocol with suitable example.
- 15a.i. Explain the various approaches for fragmenting a relation with example? (8)
ii. What are the various feature of distributed database versus centralized database system? (8)

Or

- b. Compare Object-Oriented versus Object-Relational database. State with suitable example.
