

Roll No.

24442

**B.Tech. 7th Sem.
(Electronics and Communication
Engg.) Examination–May, 2013**

DATA COMMUNICATION

Paper ECE-407-F

Time : 3 hours

Max. Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Attempt **five** questions in total. **Question No. 1 is compulsory.** Select **one** question from each Unit. All questions carry equal marks.

1. (a) Differentiate between DPSK and PSK. 3
(b) Define Digital radio. 4
(c) Which are the data communication hardware? 3

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(1)

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- (d) Explain Token pass ring, how it works ? 3
- (e) What do you understand by CODECS. 4
- (f) What do you understand by authentication. 3

UNIT - I

2. (a) Draw the block diagram of digital communication system and explain the function of each block. 10
- (b) Explain FSK and find out its bandwidth efficiency and probability of error. 10
3. (a) What do you understand by Shanon limit for information capacity. Explain in details. 10
- (b) Discuss trellis encoding in details. 10

UNIT - II

4. (a) Explain the various data communication codes and their characteristics. 10
- (b) What do you understand by error control. How is it being implemented in data communication ? 10
5. Write short notes on the following interfaces :
- (a) RS 232 10
- (b) X.21 10

UNIT - III

6. Explain OSI model with a suitable diagram and give out function of each layer in details. 20

7. (a) What do you understand by ISDN ?
Explain its working and advantages in
data communication. 10
- (b) Explain in detail RFID technology. 10

UNIT - IV

8. Explain FDM in details. Give out various
FDM hierarchy with the details of
bandwidth used for the various groups. 20
9. Write short notes on :
- (a) Firewalls. 6
- (b) Domain name service. 7
- (c) Internet addresses. 7