

Roll No.

3551

**B. Tech. 7th Semester (ECE) Professional
Elective-IV Examination – February, 2022**

DATA COMMUNICATION NETWORKING & SECURITY

Paper : PEC-ECE-411-G

Time : Three Hours]

[Maximum Marks : 75

*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 examination.*

Note : Q. No. 1 is *compulsory* and attempt any *one*
question from each unit.

1. Write short notes on the following : 15
- (a) OSI model
 - (b) FDM
 - (c) IP address
 - (d) RSP

UNIT – I

2. (a) Define TCP/IP model in detail. 8
(b) Explain various protocols of data communication. 7

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3. (a) Describe analog and digital signal in detail. 8
(b) What is transmission impairment ? Explain. 7

UNIT - II

4. (a) Describe various transmission media in detail. 8
(b) Compare circuit switched and packet switched. 7
5. (a) Describe data link layer design issues. 8
(b) Explain error detection and correction codes. 7

UNIT - III

6. (a) Describe multicast routing protocols in detail. 8
(b) Discuss the IPV6 in the network layer. 7
7. (a) Compare UDP and TCP in detail. 8
(b) What is quality of service ? Explain. 7

UNIT - IV

8. (a) Explain Audio and video compression. 8
(b) Describe the concept of electronic mail. 7
9. Explain various network security in detail. 15