

B.Tech. (ECE) 7th Semester, Professional Elective-IV
(G-Scheme) Examination, December-2022
DATACOMMUNICATION NETWORKING & SECURITY
Paper-PEC-ECE-411G

Time allowed : 3 hours]

[Maximum marks : 75

Note: The students have to attempt five questions in total, first being compulsory and sections one from each unit.

1. (a) Give any four difference in digital and Analog signals. 2.5
- (b) What do you mean by multiplexing? What is its advantages and disadvantages. 2.5
- (c) What do you mean by quality of services. 2.5
- (d) Explain integrated services. 2.5
- (e) What is firewall. Explain. 2.5

Unit-I

2. Explain the OSI model in detail, also compare it with TCP/IP model and also discuss their advantages and disadvantages. 15
3. Write short notes on:
 - (i) Digital to Analog conversion 5
 - (ii) Analog to Digital conversion 5
 - (iii) Transmission Impairment 5

Unit-II

4. (a) Discuss the FDM, WPM and TDM in details. 7½
(b) Explain the circuit - switched Network 7½
5. Discuss the error deletion and correction code with taking a suitable example. Also discuss the different types of errors. 1.5

Unit-III

6. Write the short notes on:
- (i) IP Address Classes 5
 - (ii) ICMP 5
 - (iii) Multicast routing 5
7. Discuss the following:
- (i) User datagram protocol 7½
 - (ii) Various Techniques to improve QOS 7½

Unit-IV

8. Explain the following:
- (i) Electronics mail, File Transfer. 7½
 - (ii) Digitizing audio and video 7½
9. Discuss the following in details:
- (i) Cryptography 5
 - (ii) Digital Signatures 5
 - (iii) DES and AES 5