

Roll No.

Total No. of Pages :02

Total No. of Questions : 09

B.Tech.(EE)(2019 Onwards E-II) (Sem.-7,8)
NETWORK AND DATA COMMUNICATION
 Subject Code : BTEE-804E
 M.Code : 71940

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. **Answer briefly :**
 - a. Distinguish between Serial and Parallel Data Transmission.
 - b. What is the bandwidth of fiber optics?
 - c. Define the terms bit rate and baud rate. Give the relation between them.
 - d. What are the different types of errors in data communication?
 - e. Differentiate between circuit switching and packet switching.
 - f. Explain frequency - Reuse principle.
 - g. Why checksum field is optional in the case of IP protocol?
 - h. What is the class of 221.23.45.67 IP address? Explain.
 - i. Which layer provides end-to-end connectivity from host-to-host?
 - j. Which MAC layer protocol is used by 802.11 WLAN?

SECTION-B

2. What are the different causes of transmission impairments? Discuss in detail.
3. Differentiate between circuit switching and packet switching.
4. Describe about various digital-to-digital signal encoding techniques.
5. Explain CRC with an example. How does single bit error differ from a burst error?
6. Describe the difference between cable modems and standard voice band modems.

SECTION-C

7.
 - a. Explain CRC with an example. How does single bit error differ from a burst error?
 - b. Discuss in detail internet protocol (IP) header of TCP/IP protocol suite.
8. Explain the OSI Network architecture specifying the functions of each layer.
9.
 - a. With a neat diagram, explain FDM with respect to multiplexing and demultiplexing, and mention its applications.
 - b. Discuss spread spectrum way of data communication in detail. Explain different techniques employed under this technique.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.