CBCS SCHEME

USN | | | | | | | | | | |

17CS46

Fourth Semester B.E. Degree Examination, Dec.2023/Jan.2024
Data Communication

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Define Data Communication. Explain the components of data communication. **(06 Marks)**
b. Explain the maturity levels and requirement levels of an RFC. **(08 Marks)**
c. Explain the general organization of internet administration. **(06 Marks)**

OR

2 a. Explain different causes for transmission impairments during signal transmission through media. **(06 Marks)**
b. Briefly explain digital signal transmission methods. **(04 Marks)**
c. Explain the following: i) NRZ ii) NRZ – L iii) NRZ – I iv) RZ v) AMI. **(10 Marks)**

Module-2

3 a. Explain the components of PCM encoder. **(06 Marks)**
b. What is Data transmission? Explain its modes. **(08 Marks)**
c. Explain the mechanisms for modulating digital data into analog signal. **(06 Marks)**

OR

4 a. Explain the different categories of multiplexing. **(06 Marks)**
b. Explain the technical of spread spectrum. **(08 Marks)**
c. Define switching. Explain the methods of switching. **(06 Marks)**

Module-3

5 a. Explain the types of errors. **(05 Marks)**
b. Explain the process of error detection in block coding with neat diagram. **(08 Marks)**
c. Explain the method of CRC division using polynomials. Give an example. **(07 Marks)**

OR

6 a. Explain the strategies of byte stuffing and unstuffing in detail. **(08 Marks)**
b. With neat diagram, explain stop and wait protocols. **(06 Marks)**
c. Explain different frame types available in HDLC. **(06 Marks)**

Module-4

7 a. With neat diagram, explain the procedure for pure ALOHA. **(06 Marks)**
b. Describe the select and poll functions in polling access method. **(06 Marks)**
c. Explain different types of persistence methods. **(08 Marks)**

OR

8 a. Explain IEEE standards for LANS. **(08 Marks)**
b. What are the characteristics of standard Ethernet? Explain. **(06 Marks)**
c. Explain the types of IEEE802.11 mac sub layer. **(06 Marks)**

Module-5

9	a.	What is Wimax? Explain different services it provides to the subscriber.	(08 Marks)
	b.	Explain the operation of cellular telephone.	(06 Marks)
	c.	Explain the types of satellite orbits.	(06 Marks)

OR

10	a.	What is Mobile IP? Explain the phaser for communication in mobile IP.	(07 Marks)
	b.	Explain various ICMPV6 messages.	(06 Marks)
	c.	Describe the wayl to make transitional from IPV4 to IPV6.	(07 Marks)

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