

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: BBA
BRANCH: BBA**

**SEMESTER : VI/ADD
SESSION : SP/2025**

SUBJECT: MT311 - COMPUTER NETWORK

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Explain Data Communication and its fundamental characteristics.	[5]	1 2
Q.1(b)	Give a comparative account of LAN, MAN & WAN in terms of home and business application.	[5]	1 2
Q.2(a)	With diagram compare each layer of OSI & TCP/IP and elaborate the impact of TCP/IP in Data Communication.	[5]	2 3
Q.2(b)	Differentiate between MAC & IP address in terms of layer working, format and significance.	[5]	2 3
Q.3(a)	Discuss the advantages of Digital transmission over Analog transmission with the implementation of frequency shift keying.	[5]	3 2
Q.3(b)	An analog signal has a bit rate of 8000 bps and a baud rate of 1000 baud. How many data elements are carried by each signal element? How many signal elements do we need?	[5]	3 3
Q.4(a)	Sketch the comparative evolution of different switching techniques and its impact on Data Communication.	[5]	4 3
Q.4(b)	Differentiate between frequency division multiplexing & time division multiplexing.	[5]	4 4
Q.5(a)	Elaborate the main responsibility of Data link Layer with layered diagram of TCP/IP model.	[5]	5 2
Q.5(b)	Differentiate between odd and even parity with example. Transmit the following data using Two-Dimensional parity-check method. 1101100 , 0111010, 1101110, 0101010, 0001011.	[5]	5 4

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