

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

**CLASS: MBA
BRANCH: MBA**

**SEMESTER : III
SESSION : MO/2025**

SUBJECT: MT539 BUSINESS DATA COMMUNICATION

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)	Discuss the characteristics of Signals in a communication channel	[5] 1	1
Q.1(b)	A small business plans to set up a LAN for 20 employees. Suggest an appropriate network topology and explain how it supports their communication needs.	[5] 2	2
Q.2(a)	Differentiate between a hub and a switch in the context of a corporate network	[5] 1	1
Q.2(b)	A company is experiencing slow data transfer rates in its internal network. Suggest two possible causes and their solutions related to business data communication.	[5] 3	2
Q.3(a)	What is the role of the Network Layer in the OSI model for business data communication	[5] 2	1
Q.3(b)	A company's network has a subnet mask of 255.255.255.0 and an IP address range of 192.168.1.0. Calculate the number of usable host addresses and explain how this impacts the scalability of their business network.	[5] 3	3
Q.4(a)	Describe the technique for transmission impairment and allocating IP Addresses to a network system.	[5] 2	2
Q.4(b)	Differentiate between Unicast, Multicast and broadcast channels	[5] 1	1
Q.5(a)	Discuss the standards for computer networks	[5] 2	2
Q.5(b)	Implement the collision detection techniques in a computer network	[5] 4	2

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