

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

**CLASS: MTECH
BRANCH: CSE**

**SEMESTER : III
SESSION : MO/2024**

SUBJECT: EC603 INTRODUCTION TO WIRELESS 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)	Use block diagram to explain how a typical wireless communication system works.	[5] 01	02
Q.1(b)	Use a block diagram to show how communication is achieved using satellite phones.	[5] 01	02
Q.2(a)	Frequency reuse increases system capacity. Why and how?	[5] 02	04
Q.2(b)	Explain how co-channel interference and adjacent channel interference can be minimized.	[5] 02	05
Q.3(a)	Explain the multipath propagation and multipath fading? Sketch diagrams to explain	[5] 03	04
Q.3(b)	Derive an expression to represent the received signal using free space path loss model	[5] 03	04
Q.4(a)	Explain different types of network configurations offered by WLAN	[5] 04	03
Q.4(b)	Compare Bluetooth, ZigBee and Ultrawide band communications.	[5] 04	03
Q.5(a)	Compare FDMA and TDMA schemes.	[5] 05	03
Q.5(b)	In your perspective, what are the merits of Spread spectrum technique?	[5] 05	05

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