

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION)

CLASS: B.TECH.  
BRANCH: ECE

SEMESTER : VII/ADD  
SESSION : MO/2025

SUBJECT: EC409R1 WIRELESS COMMUNICATION

TIME: 02 Hours

FULL MARKS: 25

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	Compare WPAN, WLAN and WWAN standards	[2] 1	2
Q.1(b)	With the help of suitable block diagram explain Satellite Communication	[3] 1	2
Q.2(a)	Compare Wireless, Cellular and Mobile Communication	[2] 1	2
Q.2(b)	Explain Multipath propagation. How it is different from LOS communication	[3] 1	3
Q.3(a)	Defined the process of Interference. Compare Co-Channel and Adjacent Channel Interference	[2] 2	1
Q.3(b)	Discuss the process of Handoff in detail. Compare Hard and soft Handoff	[3] 2	2
Q.4(a)	Defined cellular boundary and discuss its dependency on the antenna over BTS. How it is different from radiation pattern of the antenna.	[2] 2	3
Q.4(b)	Explain the Architecture of UMTS. How it is different from GSM	[3] 2	2
Q.5(a)	Explain WCDMA in detail	[2] 2	2
Q.5(b)	Derive an expression for free space propagation model	[3] 2	3

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