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

CLASS: M.Tech   SEMESTER : III
BRANCH: EEE/CAAD   SESSION : MO/2022

SUBJECT: EC548 INTRODUCTION TO WIRELESS COMMUNICATION
TIME: 3:00 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.

			CO	BL
Q.1(a)	Enumerate various features of 4G.	[2]	CO1	BL1
Q.1(b)	Explain various segments of GPS system.	[3]	CO1	BL2
Q.1(c)	Comment on typical configurations used in satellite communication systems.	[5]	CO1	BL4
Q.2(a)	How is frequency reuse used in cellular systems?	[2]	CO2	BL2
Q.2(b)	Discuss the general architecture of a cellular system.	[3]	CO2	BL2
Q.2(c)	Comment on how the Co-channel interference of a cellular system can be minimized.	[5]	CO2	BL4
Q.3(a)	Draw a diagram to show the typically received signal in mobile cellular communication environment.	[2]	CO3	BL2
Q.3(b)	Derive the expression for free space propagation model and discuss the concept of path loss.	[3]	CO3	BL3
Q.3(c)	Differentiate between Flat Fading and frequency selective fading channels	[5]	CO3	BL2
Q.4(a)	Draw different network configuration used in Bluetooth	[2]	CO4	BL2
Q.4(b)	Compare Ad hoc and infrastructure-based network configurations used in WLAN	[3]	CO4	BL3
Q.4(c)	Give a comparative overview of different WPAN standards	[5]	CO4	BL3
Q.5(a)	What do you mean by Multiple Access Schemes?	[2]	CO5	BL2
Q.5(b)	Discuss the applications of FDMA and TDMA schemes.	[3]	CO6	BL4
Q.5(c)	Explain the applications of spread spectrum technique and discuss how CDMA works.	[5]	CO6	BL4

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