

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Winter-2023

Course: B. Tech. Branch: Electronics Engineering Semester: VII

Subject Code & Name: Wireless Communication (BTEXPE704D)

Max Marks: 60 Date:09-01-24 Duration: 3 Hr.

Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

	(Level/CO)	Marks
Q.1 Solve Any Two of the following.		12
A) Explain the concept of frequency reuse in cellular networks.	CO3	6
B) Explain the concept of trunking in cellular systems Also Define and discuss the importance of Grade of Service in a cellular network.	CO3	6
C) Trace the evolution of wireless communication from 1G to 5G.	CO3, CO1	6
Q.2 Solve Any Two of the following.		12
A) Explain the functions of key elements such as: Mobile Station (MS), Base Station Subsystem (BSS), Network Switching Subsystem (NSS), and Operation and Maintenance Center (OMC).	CO4	6
B) Explain the functions of Broadcast Control Channel (BCCH) and Common Control Channel (CCCH).	CO3	6
C) Explain the handover process during an ongoing call.	CO3	6
Q.3 Solve Any Two of the following.		12
A) Discuss the factors that influence the selection of modulation parameters in OFDM.	CO1, CO4	6
B) What is windowing, and how is it applied in OFDM?	CO1, CO4	6
C) Define spectral efficiency in the context of OFDM Also Discuss methods to improve spectral efficiency in an OFDM system.	CO1, CO4	6
Q.4 Solve Any Two of the following.		12
A) Define the forward link and reverse link in a CDMA system and discuss its capacity considerations.	CO4	6
B) Discuss the functions of the Traffic Channel (TCH) and Control Channel (CCH).	CO4	6
C) Explain the stages of call processing in a CDMA IS95 system	CO4	6

Q. 5	Solve Any Two of the following.		12
A)	Explain the architecture of a Wireless Sensor Network.	Understand	6
B)	Write short notes on : WIMAX, Zigbee	Understand	6
C)	Describe the Bluetooth protocol stack and its layers	Understand	6

***** End *****