U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

September / October 2023 Supplementary Examinations

Programme: B.E. **Semester: VII**
Branch: Institutional Elective **Duration: 3 hrs.**
Course Code: 19EC7OE2MC **Max Marks: 100**
Course: Fundamentals of Mobile Communications

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1	a)	Discuss the spectrum allocation with services offered within the range of operation.	**10**
	b)	What is Multiplexing. With relevant diagrams compare FDMA, TDMA and CDMA schemes.	**10**

UNIT - II

2	a)	Explain the techniques to increase mobile communication coverage area and capacity.	**08**
	b)	A mobile system with cluster size of 10 has cell radius of 5Km. Determine the frequency reuse distance.	**04**
	c)	What is the need of channel assignment strategies? Discuss fixed and dynamic channel assignment strategies.	**08**

UNIT - III

3	a)	Explain GSM architecture with a neat block diagram.	**10**
	b)	With relevant diagrams of call setup flow, Explain the procedure of placing a call in GSM.	**10**

OR

4	a)	List the different channels used in GSM and describe its relevance.	**10**
	b)	Mobile Station moves from BSC A to another BSC B, both belonging to same MSC. Analyze howhandover takes place in the given scenario. Differentiate between soft and hard handover.	**10**

UNIT - IV

5	a)	List the benefits of Edge computing. Explain Edge architecture with relevant block diagram.	**10**
	b)	How does a wireless Adhoc network work. Discuss with an example.	**10**

OR

6	a)	With relevant block diagram describe UMTs network architecture in detail.	**10**
	b)	Write short notes on Ultra Wideband systems.	**10**

UNIT - V

7	a)	Investigate the roles of mobile commerce and mobile payments in global business with an example.	**10**
	b)	Explain M-commerce lifecycle and its features.	**10**

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