Roll No.											Total No. of Pages : 02
Total No.	of	Qu	es	tio	ns	0	9				
B.Tech. (CSE / EE / ECE / IT) (Sem.–7,8)											
MOBILE COMMUNICATION & NETWORKS											
Subject Code : BTEC-908B-18											
M.Code : 91013											
Date of Examination : 24-01-2023											
Time : 3 Hrs.											Max. Marks:60
		IS ^	TO	CA		ID.		ES	:	hei	isting of TEN questions carrying TWO marks

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

## **SECTION-A**

- 1. Write briefly :
  - a. What is the various channel allocation techniques used in cellular communication?
  - b. What is frequency selective fading?
  - c. Define Frequency reuse.
  - d. What is cell sectoring?
  - e. What are the reasons for choosing Hexagonal cells?
  - f. Differentiate hard and soft handoff.
  - g. Define slow fading.
  - h. Define Doppler shift.
  - i. Define bit error rate.
  - j. Define interference.

## **SECTION-B**

- 2. Explain the GSM services in detail.
- 3. Explain Rake receive in detail.
- 4. What are near and long distance propagation.
- 5. Explain transmit Diversity-Altamonte scheme in detail.
- 6. Explain various spatial multiplexing techniques in detail.

## **SECTION-C**

- 7. Consider a cellular system which consists of 34 cells with the cell radius as 1.4 km. a total frequency bandwidth is capable of supporting 343 traffic channels. Find what geographical area in km can be covered and the number of channels available per call. [Assume N=7 reuse cellular pattern]
- 8. Discuss statistical multipath channel models in detail.
- 9. Explain the forward block diagram of IS-95.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.