2EC705 ELECTIVE II(A)

GANPAT UNIVERSITY

B. Tech. Semester VII (EC) CBCS Regular Examination, Nov Dec 2013

WIRELESS COMMUNICATION (2EC 705 ELECTIVE II(A))

Max. Time: 3Hrs.]

[Max. Marks: 70

Instructions:
1. Attempt all questions.
2. Answers to the two sections must be written in separate answer books.
3. Figures to the right indicate full marks.
4. Assume suitable data, if necessary.

SECTION I

1	(A)	Explain signal processing in GSM from transmitter end to receiver end.	6
	(B)	Compare CDMA with GSM.	6

OR

1	(A)	Explain forward CDMA channel with the help of diagram.	6
	(B)	Draw GSM frame structure and explain it.	6

2	Write short notes on	11
	(A) MIMO	
	(B) Rake receiver in CDMA.	

OR

2	(A)	What do you meant by PN sequence and explain the logic of its generation.	5
	(B)	How do you install the GSM site? Give overview.	6

3	(A)	What is frequency reuse? Where its concept is used in wireless technology?	6
	(B)	How you can improve coverage and capacity of GSM system?	6

SECTION-II

4　(A)　How a call initiated by a mobile is established?　　　　　　　　　　8
　　(B)　Find the Fraunhofer distance of antenna with maximum dimension of 1meter　　4
　　　　　working at GSM frequency.

OR

4　(A)　Explain 2G technologies in complete detail.　　　　　　　　　　　7
　　(B)　Write short notes on reflection in wireless environment.　　　　　5

5　(A)　Explain the importance of Fresnel zone in wireless communications.　　6
　　(B)　Give briefing about hata model and explain its use in CDMA one system　　5
　　　　　design.

OR

5　(A)　Compare flat fading with frequency selective fading　　　　　　　6
　　(B)　In the US digital cellular, if carrier frequency fc=900 MHz and the mobile　　5
　　　　　velocity is 70 Km/hr. Find the receiver carrier frequency for positive Doppler
　　　　　shift.

6　(A)　Write short notes on 0.3 GMSK.　　　　　　　　　　　　　　6
　　(B)　Compare BPSK with QPSK. Where these modulation techniques are used in　　6
　　　　　wireless communication.

END OF PAPER