3EC 301 Seat No: ----------

GANPAT UNIVERSITY

M. Tech. Semester III (EC) Electronics & Communication Engineering

REGULAR Examination, Nov-Dec 2014

3EC 301: MOBILE COMMUNICATIONS

Max. Time: 3 Hrs.] [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.

SECTION-I

Q1	(A)	What is duopoly? Explain the concept of CAI.	6
	(B)	Explain 2G to 3G evolution in wireless communications.	6
		OR	
Q1	(A)	What are concepts behind grade of service? Explain in complete detail.	6
	(B)	How signal processing is done in GSM? What is 0.3 GMSK?	6
Q2	(A)	How soft capacity increases the number of customers in CDMA system?	6
	(B)	Compare forward link of CDMA with reverse link.	5
		OR	
Q2	(A)	What are the technical challenges in wireless communications?	4
	(B)	Explain types of services for wireless communications.	7
Q3	(A)	How project planning is done for GSM site. Give assumptions and calculate the time to finish the project.	8
	(B)	What are the points to be considered for commissioning of rectifier at MSC of GSM site?	4

Section: II

		...he internal diagram of BTS and BSC and explain any three cards used in it.	8
	(B)	Explain the concept of large scale fading.	4
		OR	
Q.4	(A)	Explain the concept of Fresnel zone and give its importance in wireless planning.	6
		...is the use of HATA model? What are the correction factors used in it?	6
Q.5	(A)	What is the concept of small scale fading? Give briefing.	4
	(B)	What is the concept space diversity for GSM? What is thumb rule for distance between two antennas used as space diversity for GSM?	7
		OR	
Q.5	(A)	What is frequency hopping? Explain where and how it is used.	6
	(B)	State the importance of concept of Doppler shift.	5
Q.6	(A)	What are the research areas of OFDM? Explain any one in detail.	6
	(B)	How MIMO concept is useful for wireless communications.	6

END OF PAPER
