

GANPAT UNIVERSITY

B. Tech. Semester: VII Electronics and Communication Engineering

Regular / Remedial Examination Nov-Dec 2016

2EC 705(A) WIRELESS COMMUNICATION

Time: 3 Hours

Total 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 and standard terms and notations are used.
4 Assume suitable data, if necessary.

Section - I

- Que. – 1** (A) How a cellular telephone call is made? Give one practicable example. 7
(B) Find the fraunhofer distance for an antenna with maximum dimension of one meter operating at GSM frequency. If antenna has unity gains, calculate the path loss. 5

OR

- Que. – 1** (A) Explain four factors which influence small scale fading in detail. 6
(B) Discuss the difference between small scale fading with large scale fading. 6

- Que. – 2** (A) How you can increase capacity and coverage of CDMA one system? 7
(B) What is frequency reuse? Is it used in IS-95? 4

OR

- Que. – 2** (A) Give types of interference to GSM/CDMA system and explain two of them. 6
(B) Compare soft handoff with hard hand off. 5

- Que. – 3** (A) What is Doppler shift? Give its importance in wireless communication. 3
(B) Write short notes on constellation diagrams of BPSK and QPSK. 6
(C) What kind of modulation is used in GSM? Give briefing on it. 3

Section – II

- Que. – 4 (A) Explain GSM architecture with its interfaces. What is significance of OMC? 5
- (B) Write short notes on GSM control channels. 7

OR

- Que. – 4 (A) Give briefing on two types of drive tests used in GSM system. 6
- (B) Give over view of GSM project planning. 6

- Que. – 5 (A) Compare frequency diversity with Space diversity. What is Rake receiver? 6
- (B) What is frequency hopping? Give its importance in wireless communication. 5

OR

- Que. – 5 (A) Explain the concept of OFDM? Name any one research area of it. 5
- (B) Give technical specifications of Bluetooth and explain it in full detail. 6

- Que. – 6 (A) Write short note on Wi Fi. 4
- (B) How you will install sophisticated communication equipment worth sixty lakhs rupees. 8

END OF PAPER