

GANPAT UNIVERSITY

M. TECH SEM-II (EC) REGULAR EXAMINATION APRIL-JUNE 2016

3EC203: Advanced Wireless Communications

Time: 3 Hours

Total Marks: 60

- Instruction:
- 1 This Question paper has two sections. Attempt each section in separate answer book
 - 2 Figures on right indicate marks.
 - 3 Be precise and to the point in answering the descriptive questions.
 - 4 Standard terms are used.
 - 5 Assume data if necessary

Section - I

- Que. - 1 (A) What is Broadcast as far as types of wireless services are concern? (5)
Compare it with cellular telephony.
- (B) Explain any two technical challenges of wireless communication (5)

OR

- Que. - 1 (A) Define noise. What are importances of Link budget in designing a (5)
wireless link?
- (B) Obtain the fraunhofer distance for an antenna with maximum dimension (5)
of 1.2 meters operating at CDMA frequency

- Que. - 2 (A) Give importances of outdoor propagation models for wireless (5)
communication.
- (B) Explain Okumura model for wireless communication. (5)

OR

- Que. - 2 (A) Compare small scale fading with large scale fading. (5)
- (B) Write the importance of Fresnel zone in microwave communication (5)
system design.

- Que. - 3 (A) Write short notes on flat fading in wireless communication. (5)
- (B) How Doppler shift changes the design in mobile communication? (5)
Explain in complete detail.

Section – II

- Que. – 4 (A) Explain coded OFDM system with help of diagram. (5)
(B) What is PAPR? How we can reduce it? (5)

OR

- Que. – 4 (A) Explain SISO, SIMO and MIMO concept with help of diagrams. (5)
(B) Write short notes on Smart antenna. (5)

- Que. – 5 (A) How installation of costly communication is being done? Give major points for it. (5)
(B) How commissioning of rectifier at BTS site is being done? Explain calculation behind it. (5)

OR

- Que. – 5 (A) How hard handoff is done? Name any technology where it is used. (5)
(B) Explain GOS and Trunking efficiency in complete detail. (5)

- Que. – 6 (A) How you can improve capacity and coverage of CDMA system? (6)
(B) What are points to be considered for Project planning of GSM system? (4)

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END OF PAPER