

B.Tech IV Year I Semester (R13) Supplementary Examinations June 2017

WIRELESS COMMUNICATION
(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What is the significance of frequency reuse?
 - (b) Define grade of service.
 - (c) What is the difference between large scale and small scale fading?
 - (d) Define level crossing rate.
 - (e) What is rake receiver?
 - (f) List out different types of equalizers.
 - (g) Explain TDMA.
 - (h) What parameters influence the capacity of the cellular system?
 - (i) What are the applications of multicarrier systems?
 - (j) Define inter symbol interference.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 What are the different techniques to improve coverage and capacity in a cellular system?
- OR**
- 3 If 20 MHz of total spectrum is allocated for a duplex wireless FDD cellular telephone system and each simplex channel has 25 kHz RF bandwidth, find: (i) The number of duplex channels. (ii) The total number of channels per cell site, if N = 4 cell reuse factor is use.

UNIT – II

- 4 Explain different types of outdoor propagation models?
- OR**
- 5 What are the factors affecting small scale fading?

UNIT – III

- 6 What are the different nonlinear equalizers and explain in detail with neat diagrams?
- OR**
- 7 Explain different types space diversity methods in detail.

UNIT – IV

- 8 Explain in detail signaling and voice application of CDMA system.
- OR**
- 9 What are the differences between wireless and fixed telephone networks?

UNIT – V

- 10 Explain the matrix representation of OFDM with example.
- OR**
- 11 With neat sketch, explain data transmission using multicarrier.
