C 1049 (Pages : 2) Name.....

Reg. No.....

EIGHTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE EXAMINATION, APRIL 2016

EC/PTEC 09 802—WIRELESS MOBILE COMMUNICATION

Time : Three Hours Maximum : 70 Marks

Part A

Answer **all** *questions.*

1. Draw the frequency assignment for radio transmission.
2. Define dwell time.
3. State the differences between large and small scale fading.
4. List the non-linear effects of FDMA.
5. State the goals of IMT-2000 standard.

(5 × 2 = 10 marks)

Part B

Answer any **four** *questions.*

6. Derive an expression for signal to interference ratio (S/I) for 7 cell cluster system.
7. Differentiate between soft and hard handoff.
8. Discuss the various parameters of mobile multipath channels.
9. Explain the principles of frequency hopped spread spectrum technique.
10. Compare CDMA techniques with TDMA.
11. Write brief notes on IMT-2000 standard with suitable structure.

(4 × 5 = 20 marks)

Part C

Answer **all** *questions.*

12. (a) Explain the methods for improving capacity in wireless cellular systems.

Or

(b) (i) Write short notes on trunking and Grade of Service (GOS). (5 marks)

(ii) Explain the concept of frequency reuse in cellular system. (5 marks)

Turn over

13. (a) Explain how combining diversity overcome the limitation of selection diversity. Also give detailed notes on types of combining diversity.

Or

(b) (i) Explain the time variant two-path model of a wireless propagation channel. (5 marks)

(ii) Write short notes on doppler spectrum. (5 marks)

14. (a) Explain the techniques of TDMA in detail.

Or

(b) (i) Explain the physical layer features of WCDMA systems. (5 marks)

(ii) Discuss the principles of multiuser detection in CDMA. (5 marks)

15. (a) Explain the principles and architecture of GSM system with neat diagram.

Or

(b) (i) Write short notes on UMTS standard. (5 marks)

(ii) Discuss the radio link features in GSM. (5 marks)

(4 × 10 = 40 marks)