

Total No. of Questions : 10]

SEAT No. :

P3624

[Total No. of Pages : 2

[4959] - 1111
B.E. (Electronics)
MOBILE COMMUNICATION
(2012 Pattern) (Elective - II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:-

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right indicate full marks.*
- 3) *Use of logarithmic tables slide rule, Mollier charts, electronics pocket calculator and steam tables is allowed.*
- 4) *Assume suitable data if necessary.*

Q1) a) With a neat diagram, explain the concept of frequency reuse. [5]

b) Describe three basic propagation mechanism. [5]

OR

Q2) a) List the factors influencing small scale fading. [5]

b) With neat diagram, describe the working of RAKE receiver. [5]

Q3) a) Explain in brief the working principles of different types of small scale fading. [5]

b) Discuss the details of practical hand off consideration. [5]

OR

Q4) a) Describe the evolution of mobile radio communications. [5]

b) Explain the techniques to improve the coverage and capacity of cellular system. [5]

Q5) a) Explain the following terms to describe characteristics of speech signal. [10]

- i) Probability density function.
- ii) Autocorrelation function.
- iii) Power spectral density function.

P.T.O.

- b) Classify and explain with diagram spread spectrum multiple access technique. [8]

OR

- Q6)** a) With neat block diagram explain function of each block of LPC coding system. [8]

- b) Explain packet radio access techniques using ALOHA protocol and compare I persistent, Non persistent and P - persistence CSMA technique. [10]

- Q7)** a) Explain SS7 signalling techniques. [8]

- b) Describe traffic routing algorithm in wireless network with a neat diagram. [8]

OR

- Q8)** a) Describe the network architecture of universal mobile Telecommunication system [8]

- b) Explain the block diagram of ISDN network. [8]

- Q9)** a) Discuss different types of channel in GSM system. [8]

- b) Describe with neat block diagram the architecture of IS - 95 CDMA system. [8]

OR

- Q10)** a) Explain step by step procedure of GSM call setup from mobile to PSTN. [8]

- b) Discuss forward and reverse channels of CDMA. [8]

