

Total No. of Questions : 6]

SEAT No. :

P141

[Total No. of Pages : 2

OCT./BE/Insem.-66
B.E. (Electronics)
Mobile Communication
(2012 Pattern) (Semester - I) (Elective - II)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Assume suitable data if necessary.

Q1) a) Explain the following channel assignment strategies used in mobile communication. [6]

- i) Fixed
- ii) Borrowing
- iii) Dynamic

b) Describe how mobile communication has evolved from 1G to 3G. [4]

OR

Q2) a) Explain the following terms in brief. [4]

- i) Inter system handoff
- ii) Dwell time

b) Describe the concept of microcell zone with a suitable diagram. [6]

Q3) a) In the US digital cellular system, if carrier frequency is 1850 MHz & a vehicle is moving with velocity of 60 m/hr, calculate the received carrier frequency if the vehicle moves. [6]

- i) directly towards the transmitter
- ii) directly away from the transmitter
- iii) in a direction perpendicular to the direction of the arrival of the transmitted signal.

b) Describe the ground reflection model with suitable mathematical expressions. [4]

OR

P.T.O.

- Q4) a)** Derive the impulse response model of a multipath channel. [6]
- b)** Explain the following terms : [4]
- i) Coherence bandwidth
 - ii) Doppler spread

- Q5) a)** What is interleaving? Explain the structure of block interleaver. [5]
- b)** Explain the working of minimum shift keying (MSK) receiver. [5]

OR

- Q6) a)** Discuss any 4 factors which determine the performance of adaptive algorithms. [4]
- b)** Explain following types of diversity. [6]
- i) Polarization
 - ii) Frequency
 - iii) Time

