

Roll No.

Total Pages : 2

Exam. Code
6108

8912

BT-8/M-11

MOBILE COMMUNICATION

IT-454

Time : Three Hours]

[Maximum Marks : 100.

Note : Attempt five questions in all, selecting at least one question from each Unit. All questions carry equal marks.

UNIT-I

1. (a) Explain the concept of Frequency reuse with the help of an example. 10
(b) The coverage area of a cellular system is 2000 km² with each cell having a radius of 5 km. If there are 1000 radio channels available for handling the traffic, determine the system capacity for 7-cell reuse. 10
2. (a) What is Cell-splitting ? How does it improve the capacity of the system ? 10
(b) What types of Antennas are used for cell sites ? Discuss their salient features. 5
(c) Discuss DQPSK and its performance. 5

UNIT-II

3. (a) Discuss power requirements in mobile radio Communication. How do you determine cell site transmitter power in a cellular system ? Illustrate. 12
(b) What is Tilting effect ? Discuss. 8

8912/1800/KD/165

[P.T.O.]

4. (a) How does diversity improve the performance of mobile radio communication system ? Explain in brief. 8
(b) Derive the expression for selection diversity improvement. 12

UNIT-III

5. (a) What are various services offered by GSM ? Discuss those. http://www.kuonline.in 10
(b) What do you understand by Speech coding ? Explain the working of a typical speech encoder. 10
6. (a) Explain the concept of Frequency Hopped Multiple Access technique. 10
(b) Briefly mention the use of advanced intelligent network concept in PCS. 5
(c) Enlist important features of UMTS. 5

UNIT-IV

7. (a) With the help of block diagram, discuss Satellite system architecture. 10
(b) Write brief notes on LEO and MEO systems. 10
8. Write brief notes on the following :
(a) VSAT.
(b) Iridium.
(c) GPS information. 7+7+6

8912/1800/KD/165

2