

ET801M - Mobile Communication and Networks

P. Pages : 2

Time : Three Hours



GUG/W/24/14354

Max. Marks : 80

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- Notes :
1. All questions carry equal marks.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Write a note on packet switching in mobile communication network. 8
b) Describe in detail about the steps involved in making a cellular telephone call. 8

OR

2. a) Write in short about Grade of Service (GOS) in mobile communication. 8
b) Write a note on voice switching techniques in mobile communication. 8
3. a) Explain the following channel assignment strategies: 8
i) Fixed channel assignment.
ii) Dynamic channel assignment
b) What is frequency planning in cellular system. Draw Frequency reuse pattern for $N = 4$ and $N = 7$. 8

OR

4. a) What is small scale fading? What are the factors influencing small scale fading? 8
b) Derive expression for the Clarke's model for flat fading? 8
5. a) Explain GSM Architecture. 8
b) Explain the specifications and characteristics for GSM standards. 8

OR

6. a) Explain radio transmission parameters used in GSM services. 8
b) Explain any two applications of GSM in detail. 8
7. a) i) List out features of HSCSD for 2.5G GSM 4

- ii) For EDGE 2.5G and GPRS state following specifications: 4
Data rate
Channel bandwidth
Modulation technique
Number of voice channel.

- b) Explain OFDM technique. 8

OR

8. a) Write a short note on TDMA frame structure. 8

- b) Explain GSM time hierarchy. 8

9. a) Explain with neat diagram 5G architecture for mobile communication. 8

- b) Write short note on LTE frame structure. 8

OR

10. a) Write short note on LTE architecture. 8

- b) Compare 4G mobile Technology and 5G mobile Technologies. 8
