

ET801M - Mobile Communication and Networks

P. Pages : 2

Time : Three Hours



GUG/S/25/14354

Max. Marks : 80

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

1. a) What is electronic switching system. Explain basics of switching system. **8**
- b) Draw the organization of typical centralized SPC. Comments on how the availability of the processor can be improved. **8**

OR

2. a) What is time division space switching. Explain the operation of input and output controlled time division space switch. **8**
- b) Explain the working of message switching and packet switching system. **8**
3. a) Explain the elements of cellular mobile radio communication. **8**
- b) Explain in details hand off strategies of cellular communication. **8**

OR

4. a) Explain cell splitting and sectoring. **8**
- b) What is small scale fading. Explain factors influencing small scale fading. **8**
5. a) Explain the function of following. **8**
- | | |
|----------|----------|
| i) TMSI | ii) IMEI |
| iii) SIM | iv) BSS |
| v) NSS | vi) OMSS |
- b) What is GSM. List the specifications of GSM and explain various interface used in GSM architecture. **8**

OR

6. a) Draw and explain TDMA frame structure of GSM system. **8**
- b) Explain different types of bursts used in GSM. **8**
7. a) Describe and explain in details various logical channels used in GSM system. **8**

- b) What is GPRS. Explain the architecture of GPRS system. **8**

OR

- 8.** a) Explain multiple Access techniques used in wireless communication. **8**

- b) What is common control channel. Explain various common control channel used in GSM. **8**

- 9.** a) What is 5G technology. Draw and explain the 5G architecture. **8**

- b) Explain mobile generation with their technical specifications (2G, 3G, LTE, 4G, & 5G). **8**

OR

- 10.** a) What is CDMA. Explain Frame structure of CDMA. **8**

- b) What is LTE. Draw and explain the frame structure of LTE. **8**
