

M.Sc. S.Y. (Electronics) (NEP Pattern) - Semester-III
PSCELT303 - Paper-III : Mobile and Satellite Communication

P. Pages : 2

Time : Three Hours



GUG/W/24/15977

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw and label diagram wherever necessary.

Either:

1. a) Write short notes on: 8
- i) Frequency reuse ii) Hand-off strategies
- b) Draw block diagram of cellular telephone system and describe function of each block. 8

OR

- c) Describe the general concept of cellular digital switching system. 8
- d) Describe the role of microwave in cellular system. 8

Either:

2. a) Describe GSM frame structure and services offered by GSM Channel. 8
- b) What are the frequency and time diversity technique in mobile communication. Describe their utility. 8

OR

- c) Describe measurement of signal strength with suitable example. 8
- d) Describe the following features of GSM handset- 8
- i) SMS and ii) Security

Either:

3. a) What is satellite stabilization? Describe the importance and technique of satellite stabilization. 8
- b) Describe the satellite communication system. 8

OR

- c) Describe uplink and downlink in satellite communication. 8
- d) Describe system noise temperature and G/T ratio. State its importance in satellite communication. 8

Either:

- 4. a) Describe FDMA and TDMA synchronization. 8
- b) Describe the followings: 8
 - i) Weather forecasting, and
 - ii) Remote sensing

OR

- c) Describe satellite services used for Direct To Home (DTH) TV. 8
- d) What is CDMA? Describe its applicability to commercial system. 8
- 5. a) Describe space polarization in cellular telephone system. 4
- b) Describe the feature of GSM handset. 4
- c) Explain the effect of eclipse on satellite communication. 4
- d) What is TDMA? State its advantages and disadvantages. 4
