Manarat International University (MIU)

Department of Computer Science and Engineering

Mid-term Examination (Spring 2019)

Cellular Mobile and Satellite Communication (CSE-472)

Full Marks: 20 Time: 1.5 Hour

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| Answer any 5 (Five) questions. All questions are of equal value. | |  |
| 1 | a) Write down the differences between analog and digital communications ? b) What is Shannon's sampling theorem ? | 4 |
| 2 | a) Why do we need satellites?  b) Define Retrograde Orbit, Descending Node. | 2 + 2 |
| 2 | a) Define cell frequency. Explain the concepts of frequency reusing in cellular network.  b) Why hexagon cell shape is highly recommended for cellular communication? | 2 + 2 |
| 4 | a) Explain different types of multiple access techniques in cellular communications.  b) State Kepler’s second law of satellite. | 4 |
| 5 | Explain the architecture GSM network in brief. | 4 |
| 6 | Elaborate the following acronyms  IMEI, PSTN, MTSO, ISDN, EIR, MSU, SIM, BTS | 0.5x8=4 |