

S.B. Roll. No.....

**WIRELESS AND MOBILE COMMUNICATION**  
**6<sup>th</sup> Exam/ECE/5619/Jun'2022**  
**(For 2018 Batch Onwards)**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Do as directed.**

**15x1=15**

- a. Name the technology used by 2G system?
- b. What are electromagnetic waves?
- c. Which shape of cell is preferred in cellular network?
- d. What are micro cells?
- e. Which interface provides the physical link between the mobile and the network?
- f. Which access technique has a very high spectral efficiency?
- g. GSM stands for \_\_\_\_\_
- h. FDMA stands for \_\_\_\_\_
- i. HSPA stands for \_\_\_\_\_
- j. THSS stands for \_\_\_\_\_
- k. What is cell cluster?
- l. What is adjacent channel interference?
- m. What is soft handoff?
- n. What is wireless communication?
- o. State SMS.

**SECTION-B**

**Q2. Attempt any six questions.**

**6x5=30**

- i. What is handoff? Explain its types.
- ii. Discuss the cellular network system in brief.
- iii. What is frequency hopping spread spectrum?
- iv. Why and how sectorization is done in cells?
- v. State Doppler Effect.
- vi. Discuss the basic concept of adjacent channel interference.
- vii. Give advantages and applications of Wireless communication.
- viii. Why hexagonal geometry shape is used in cellular system?
- ix. Explain the process of GPRS System.

**SECTION-C**

**Q3. Attempt any three questions.**

**3x10=30**

- a. Draw and explain the architecture of UMTS and its features.
- b. Draw and explain GSM architecture in detail.
- c. Explain the following propagation considerations
  - i) Geographical effect on wireless communication
  - ii) Fading
- d. Discuss features and architecture of LTE (long term evolution).
- e. Difference between TDMA, FDMA and CDMA in detail.