

**M. TECH.**  
**(SEM II) THEORY EXAMINATION 2022-23**  
**WIRELESS MOBILE NETWORKS**

**Time: 3 Hours****Total Marks: 70****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 7 = 14**

- (a) Discuss features of wireless networks.
- (b) Explain Handover in GSM.
- (c) Discuss about signal propagation.
- (d) Explain TDMA in brief.
- (e) Discuss about RFID in brief.
- (f) Describe the problems of IP in wireless networks.
- (g) Explain Database systems for mobile communication in brief.

**SECTION B****2. Attempt any three of the following:****7 x 3 = 21**

- (a) Explain various antennas types and also discuss antenna gain.
- (b) Explain GSM system architecture with diagram.
- (c) Explain BSS and ESS configuration of IEEE 802.11.
- (d) Describe the goals of mobile IP in mobile network and explain its working.
- (e) What is Wireless Application Protocol and also explain its goals.

**SECTION C****3. Attempt any one part of the following:****7 x 1 = 7**

- (a) Explain various representations of signals.
- (b) Explain spread spectrum with suitable example also explain its types.

**4. Attempt any one part of the following:****7 x 1 = 7**

- (a) Describe the network architecture of UMTS with diagram.
- (b) Discuss about CDMA with neat diagrams.

**5. Attempt any one part of the following:****7 x 1 = 7**

- (a) Explain Satellite architecture with suitable diagram.
- (b) Discuss the deficiencies of existing GEO/MEO/LEO Satellite Systems.

**6. Attempt any one part of the following:****7 x 1 = 7**

- (a) What is Wireless Sensor Network? How it is different from Traditional Network?
- (b) Explain the routing principle of Ad-hoc Networks.

**7. Attempt any one part of the following:****7 x 1 = 7**

- (a) Discuss the effect of mobility in TCP.
- (b) Write short notes on
  - (i) File System
  - (ii) WWW