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**Question Paper Code: 36402** 

## B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

#### Sixth Semester

# **Electronics and Communication Engineering**

### 01UEC602 - WIRELESS COMMUNICATION SYSTEMS

(Regulation 2013)

Duration: 1:45 hour Maximum: 50 Marks

PART A -  $(10 \times 2 = 20 \text{ Marks})$ 

## (Answer any ten of the following questions)

- 1. List the three most important effects of small-scale multipath propagation.
- 2. Mention the significant of frequency reuse in cellular networks.
- 3. Define Snell's law.
- 4. Compare slow fading and fast fading.
- 5. State advantages of offset-QPSK.
- 6. Define cyclic prefix.
- 7. State the principle of diversity.
- 8. Mention any four common methods of micro diversity.
- 9. State effects of multipath propagation on CDMA.
- 10. What is frequency hopping spread spectrum?
- 11. What are the different types of services in wireless communication?
- 12. Mention the significant of frequency reuse in cellular networks.

- 13. Define Snell's law.
- 14. Distinguish between narrowband and wideband systems.
- 15. State advantages of offset-QPSK

$$PART - B (3 \times 10 = 30 \text{ Marks})$$

# (Answer any three of the following questions)

- 16. Explain the principle of cellular networks and various types of Handoff techniques. (10)
- 17. Describe the time variant two ray model of a wireless propagation channel. (10)
- 18. Explain with neat diagram about Quadrature Phase Shift Keying (QPSK) based transmission and reception technique. (10)
- 19. Explain with diagram, the different techniques available for signal combining. (10)
- 20. Compare and contrast 2G, 3G and 4G wireless network standards with its merits and demerits. (10)