

Roll No.

Total Pages : 03

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B. Tech. EXAMINATION, 2022

Semester VI (CBCS)

WIRELESS AND MOBILE COMMUNICATION

EC-606

Time : 3 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt *Five* questions in all, selecting *one* question from each Sections A, B, C and D. Q. No. 9 is compulsory.

Section A

1. (a) Explain different blocks of Wireless Communication System. 5
- (b) Describe the principle of cellular networks. 5

2. (a) Differentiate between hard and soft handoff strategies. **5**
- (b) Explain different capacity enhancement techniques in cellular system. **5**

Section B

3. (a) Derive and explain Friis free space equation. **5**
- (b) Write a note on different diversity techniques. **5**
4. (a) Explain different path loss components. **5**
- (b) Describe Narrow band and wideband models. **5**

Section C

5. (a) Write a short note on VANETS. **5**
- (b) Explain different types of Adhoc networks. **5**
6. (a) With the help of diagram explain GSM architecture. **5**
- (b) Discuss traffic and control channels in GSM. **5**

Section D

7. (a) Differentiate between FDMA and TDMA. **5**
- (b) Explain Frequency hopping spread spectrum in brief. **5**

8. (a) Define 3G, 4G, EDGE and LTE technologies. **5**
- (b) Describe WLAN and HLAN briefly. **5**

(Compulsory Question)

9. (a) What is frequency reuse concept ?
- (b) Define static and dynamic channel allocation.
- (c) Write a short note on ISI (Inter Symbol Interference) and ACI (Adjacent Channel Interference).
- (d) Define propagation mechanisms.
- (e) Write some features of MANETS.
- (f) What are different GSM interfaces ?
- (g) Write some applications of CDMA systems.
- (h) Write a short note on near field communication.
- (i) Briefly describe WLL (Wireless Local Loop).
- (j) What is the principle of OFDM ? **10×2=20**