Roll No. ....

OLE-24444

B. Tech. 7th Sem. (ECE)
Examination – April, 2021

MOBILE COMMUNICATION

Paper : ECE-419-F

Time : Three hours]   *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Question No. **1** is **compulsory**. Attempt *one* question from each Unit.

1. (a) What are the effects of fading ?   4

(b) What is mobility management ?   4

(c) What do you meant by IEEE Standards ?   4

(d) What is coherence time ?   4

(e) What is far field region ?   4

UNIT – I

2. (a) Explain in detail various frequencies used in mobile communication.   10

(b) Describe in brief various antennas used in mobile communication. **10**

3. (a) Define the following : **10**

    (i) Doppler Spread

    (ii) Coherence Time

    (iii) Coherence Bandwidth

    (iv) Doppler Shift

(b) Explain in detail the various types of Diversity ? Also define Rake receiver. **10**

UNIT – II

4. (a) Explain in detail Multipath propagation and describe small scale fading. **10**

(b) Explain Okumara and Hata Model in detail. **10**

5. (a) Explain in detail Microcell Model. **10**

(b) Explain in detail Jake's channel model **10**

UNIT – III

6. (a) Explain various GSM services and features in detail. **10**

(b) Explain Hyper LAN in detail. **10**

7. (a) Explain forward and reverse channel parameters of IS-95 CDMA. **10**

(b) What are the advantages and problems of forward mechanisms in Bluetooth Networks regarding security, power saving and network stability. **10**

UNIT – IV

8. (a) Write short note on Mobile Ad-Hoc networks and performance enhancing proxies. **10**

(b) Explain characteristics of TCP over 2.5 G and 3G Wireless networks. **10**

9. (a) Explain in detail the following steps in mobile IP : **10**

(i) Agent Discovery

(ii) Registration

(iii) Tunneling

(b) What are the advantages of using IPv6 over mobility ? Explain reverse Tunneling in detail. **10**

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