

Roll No.

OLE-24440
B. Tech. 7th Sem. (ECE)
Examination – April, 2021

WIRELESS COMMUNICATION

Paper : ECE-405-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 : Attempt *five* questions in total. Question No. **1** is *compulsory*. Attempt *one* question from each unit. All questions carry equal marks.

1. Write short notes on the following : $4 \times 5 = 20$

- (a) Discuss wireless paging system.
- (b) Why access technology is at all required for wireless communication ?
- (c) How interference affects capacity of wireless system ?
- (d) Enumerate features and advantages of ISDN.
- (e) Explain fixed network transmission hierarchy.

UNIT – I

2. (a) Enumerate the evolution of mobile radio communication system. 10
- (b) Discuss working of cordless telephone system. Also give out advantages and limitation of the system. 10
3. Write short notes on the following : $10 \times 2 = 20$
- (a) Wireless Local Area Networks.
- (b) 3 G wireless networks.

UNIT – II

4. (a) Discuss in details operation of basic cellular system. 10
- (b) Enumerate difference between Analog and Digital Cellular System. 10
5. (a) Discuss the channel assignment strategies for cellular system. 10
- (b) How we can improve the coverage area of wireless system. 10

UNIT – III

6. Explain the basic principle of measuring capacity of cellular system. Also discuss various methods to increase the capacity of the system. 20

7. Write short notes on the following : $10 \times 2 = 20$

- (a) Spread Spectrum Multiple Access.
- (b) Tabulate Comparison of FDMA, TDMA and SDMA techniques.

UNIT – IV

8. (a) Discuss in details traffic routing in wireless Networks. Also give out their advantages and limitations. 10

- (b) Discuss in details common channel signaling and also give out its applications in various communication networks. 10

9. Write brief notes on the following : $10 \times 2 = 20$

- (a) CDMA cellular Radio networks.
 - (b) Intelligent micro-cell system
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