

8. Write short notes on any *two* of the following :

- (i) ISDN
- (ii) Switching techniques in wireless networking
- (iii) Advanced Intelligent Networks. **7.5,7.5**

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CC-61

M. Tech. EXAMINATION, Dec. 2017

(Third Semester)

(Main & Re-appear)

ECE/INDUSTRY INTEGRATED

MTEC-601-B

Advanced Wireless Communication System

Time : 3 Hours]

[Maximum Marks : 75

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

Note : Attempt *Five* questions in all, selecting at least *one* question from each Part. All questions carry equal marks.

Part A

1. (a) Discuss the evolution of wireless comm. systems and their applications. **7.5**
(b) Differentiate between Analog and Digital cellular systems. **7.5**
2. What do you understand by 2G, 2.5G and 3G mobile telephone standards ? For each of these write the following parameters :
 - (i) RF Channel Bandwidth
 - (ii) Peak Data Rate
 - (iii) Typical Data Rate. **15**

Part B

3. Explain any *two* of the following models :
 - (a) Hata Model
 - (b) Durkin's Model
 - (c) Log-distance path loss model. **7.5,7.5**
4. What do you understand by Handoff ? Compare various types of Handoffs ? **15**

Part C

5. Discuss the different channels employed in CDMA. **15**
6. Consider a cellular system in which there are total number of 1001 radio channels available for handling traffic. Area of each cell is 6 sq.km. Area of the entire system is 2100 sq.km.
 - (i) Calculate the system capacity if cluster size is 7.
 - (ii) Calculate the system capacity if cluster size is 4.

Does decreasing cluster size increase the system capacity ? Explain. **15**

Part D

7. (a) Differentiate between TCP/IP and OSI models. **7**
(b) Explain the intelligent cell concept in detail. Where is it used ? **8**