

M.Tech.

**WIRELESS AND MOBILE COMMUNICATION**

**SUBJECT CODE : EC - 520 (Elective - III)**

**Paper ID : [E0577]**

[Note : Please fill subject code and paper ID on OMR]

**Time : 03 Hours**

**Maximum Marks : 100**

**Instruction to Candidates:**

- 1) Attempt any **Five** questions.
- 2) **All** questions carry equal marks.

**Q1)** (a) Define channel capacity and discuss the key factors that affect it?  
(b) Differentiate between guided and unguided media?

**Q2)** (a) Explain the difference between virtual channel and virtual path?  
(b) What are some of the limitations of using circuit switching networks for data transmission?

**Q3)** (a) What is a parabolic antenna and what are its advantages?  
(b) What is fading? What is the difference between fast and slow fading?

**Q4)** (a) What is NRZ-L? What is the major disadvantage of this data encoding approach?  
(b) Explain how Go-Back-N ARQ works?

**Q5)** (a) What are relative advantages and disadvantages of MMDS compared to LMDS?  
(b) Discuss the security services provided by WTLS?



**Q6)** Describe with block diagram IEEE 802.11 architecture? Also explain its services?

**Q7) (a)** Discuss network layer of CDMA?

**(b)** Explain various voice applications in CDMA system?

**Q8) (a)** Describe with block diagram GSM architecture and interfaces?

**(b)** How speech coding is done in GSM?

