

YMCA UNIVERSITY OF SCIENCE & TECHNOLOGY, FARIDABAD

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BTECH 5th SEMESTER

WIRELESS COMMUNICATION (CE -309)

Time: 3 Hours

Max. Marks:60

- Note: 1. It is compulsory to answer the questions of Part -1. Limit your answers within 20-40 word in this part.
2. Answer any four questions from Part -2 in detail.
3. Different parts of the same question are to be attempted adjacent to each other.
4. Use of unmarked Steam tables, Mollier charts etc. is allowed.
5. Assume suitable standard data wherever required, if not given.

PART -1

Q1. Attempt the following questions:

(2×5 marks)

- Define the frequency reuse distance for a cell radius of kilometers and a cluster size of 4?
- What is the difference between 3G and 4G?
- What do you mean by Advanced Intelligent Network?
- Differentiate between FDMA and TDMA?
- Define various wireless local area networks?
- Differentiate between cellular network and GSM network?
- What do you understand by vector quantization?
- Describe IEEE standard for WLAN.
- What do you mean by Wireless multimedia? Describe Wireless multimedia system and application.
- Write short note on Wireless local loop.

PART -2

- Q2. a) Brief about the properties of spreading codes used in CDMA system? (5 marks)
- b) Differentiate between PAN technologies and Wireless LAN? (5 marks)
- Q3. a) Discuss about the technical challenges faced by the wireless communication? (5 marks)
- b) What is the need of diversity? List different types of diversity? (5marks)
- Q4. With a neat diagram, explain various burst used in GSM? (10 marks)
- Q5. Describe the process of power controls used by cellular system and mention its advantages with a neat and clean diagram? (10 marks)
- Q6. Describe in detail Two Ray Rayleigh Fading Model? (10 marks)
- Q7. (a) Explain in detail a handoff scenario at cell boundary? (5 marks)
- (b) Explain briefly on outdoor propagation models? (5 marks)