

Roll No.

Total No. of Pages : 02

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BCA / B.Sc. (IT) / B.Tech. (CE / CSE /EE / ECE / EEE / IT/ AI & ML / AI & DS/ CSE(IoT) / DS / IoT and cyber security including block chain technology) (Sem.-6)

WIRELESS COMMUNICATION

Subject Code : BTEC-601-18

M.Code : 79373

Date of Examination : 31-05-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. Write briefly:

- a) Define cellular system.
- b) What do you mean by reduction factor?
- c) Explain ISI.
- d) What is fading?
- e) What is the significance of combining methods?
- f) Differentiate between FDM and TDM.
- g) Define the term AMPS.
- h) How CDMA is better than previous systems?
- i) What is Zigbee?
- j) Write the communicating range of Bluetooth.

SECTION-B

2. Explain the operation of cellular system.
3. Draw and explain switched combining and maximal ratio combining techniques.
4. Derive the expression for frequency reuse parameters.
5. Explain CDMA2000 standards and its specifications.
6. With the help of diagrams, explain spread spectrum multiple access.

SECTION-C

7. Draw and explain the system architecture of global system for mobile (GSM).
8. Describe Pure ALOHA and Slotted ALOHA.
9. Explain cell splitting and the various methods and techniques of cell splitting.

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.