

Code: 19EC4601A

III B.Tech - II Semester – Regular Examinations – JUNE 2022**WIRELESS COMMUNICATIONS AND NETWORKS
(ELECTRONICS AND COMMUNICATION ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

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- Note: 1. This question paper contains two Parts A and B.
 2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
 3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
 4. All parts of Question paper must be answered in one place.
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PART – A

1. a) What are the advantages and disadvantages of wireless local area networks?
- b) Compare Zigbee with WiFi.
- c) Differentiate CDMA technique with respect to TDMA and FDMA.
- d) What is the advantage of using SC-FDMA in the LTE uplink?
- e) What is Mobile IP?

PART – B**UNIT – I**

2. a) Compare and contrast IEEE 802.11 a, b, g and n standards. 6 M
 - b) List and explain L2CAP logical channels. 6 M
- OR
3. a) Draw the configuration of IEEE802.11 architecture and explain. 6 M
 - b) Explain Gigabit WiFi. 6 M

UNIT – II

4. a) Explain Bluetooth protocol stack architecture. 6 M
b) Compare Bluetooth radio and Base band parameters. 6 M

OR

5. a) Explain IEEE 802.15 architecture. 6 M
b) Explain Zigbee frame structure and explain different fields. 6 M

UNIT-III

6. a) Derive the expression for Efficiency of TDMA system. 6 M
b) Consider Global System for Mobile which is a TDMA/FDD system that uses 25 MHz for the forward link, which is broken into radio channels of 200 kHz. If 16 speech channels are supported on a single radio channel and if no guard band is assumed. Find the number of simultaneous users that can be accommodated in GSM. 6 M

OR

7. a) Compare various wireless communication systems. 6 M
b) Explain Mobile Radio propagation effects. 6 M

UNIT – IV

8. a) Explain LTE network architecture and various interfaces. 6 M
b) Explain LTE Radio Access Network. 6 M

OR

9. a) Explain the need and approach to 4G. 6 M
b) Explain LTE channel structure and protocols. 6 M

UNIT – V

10. a) Explain quality control in Mobile Application development. 6 M
- b) Explain the activity state transition diagram of Android. 6 M

OR

11. a) Explain different Android applications. 6 M
- b) Explain Mobile IP registration messages. 6 M