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Question Paper Code: 56401

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

Sixth Semester

Electronics and Communication Engineering

15UEC601-WIRELESS COMMUNICATION SYSTEMS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Radio capacity may be increased in cellular concept by_____. CO1-R
 - (a) Increase in radio spectrum
 - (b) decreasing radio spectrum
 - (c) Increasing the number of base stations & reusing the channels
 - (d) Decreasing the number of base stations
2. Mobile Assisted Handoff (MAHO) provides____. CO2-R
 - (a) Faster handoffs
 - (b) frequent handoffs
 - (c) No monitor of signal strength by MSC
 - (d) All the above.
3. Identify the incorrect option related to OFDM. CO3-R
 - (a) Multi carrier method
 - (b) Encoding digital data
 - (c) Short band digital communication
 - (d) 4G mobile communication
4. Which of the following is NOT a diversity Scheme? CO4-R
 - (a) Time
 - (b) Frequency
 - (c) Space
 - (d) Doppler
5. A_____ system is any collection of elements (or subsystems) that operate interdependently and use unguided electromagnetic-wave propagation to perform some specified function(s). CO5-R
 - (a) wireless
 - (b) Cellular
 - (c) Satellite
 - (d) Mote G

PART – B (5 x 3= 15Marks)

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|-----|--|--|-------|
| 6. | Distinguish between fixed channel assignment and dynamic channel assignment methods. | | CO1-R |
| 7. | Classify path loss model. | | CO2-R |
| 8. | Recall the advantages and disadvantages of Offset-QPSK,. | | CO3-R |
| 9. | Outline Zero Forcing algorithm. | | CO4-R |
| 10. | List the limitations in wireless networking. | | CO5-R |

PART – C (5 x 16= 80Marks)

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|-----|---|---------|------|
| 11. | (a) Analyze the different methods to improve coverage and channel capacity in cellular systems. | CO1-U | (16) |
| | Or | | |
| | (b) Compare and contrast FDMA,CDMA,SDMA,TDMA | CO1-U | (16) |
| 12. | (a) Using neat ray diagram, explain the Link Budget design for wireless channel. | CO2-App | (16) |
| | Or | | |
| | (b) Illustrate Parameters of mobile multipath channels. | CO2-App | (16) |
| 13. | (a) Describe about Transceiver Implementation. | CO3-U | (16) |
| | Or | | |
| | (b) Using suitable signals and spectrum, explain the concept of OFDM. | CO3-U | (16) |
| 14. | (a) Explain the concept of Adaptive equalization.Bring out the salient features. | CO4-U | (16) |
| | Or | | |
| | (b) Analyze the various Diversity combining techniques. | CO4-U | (16) |
| 15. | (a) Summarize the types of 802.11 wireless standards. | CO5-U | (16) |
| | Or | | |
| | (b) Explain the architecture of wireless network. | CO5-U | (16) |