Code No: 137JK

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, December - 2019
WIRELESS COMMUNICATIONS AND NETWORKS
(Electronics and Communication Engineering)

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a) What is intersystem handoff? [2]
b) Give basic concepts sectoring. [3]
c) Define large scale propagation model. [2]
d) Write the three basic propagation mechanisms. [3]
e) What are the factors influencing small scale fading? [2]
f) What are the Time Dispersion Parameters of Multipath channels? [3]
g) Give the fundamentals of equalization. [2]
h) Discuss about Zero forcing algorithm. [3]
i) List the advantages of WLAN. [2]
j) Compare standards of IEEE 802.11 a, b, g and n standards. [3]

PART – B

(50 Marks)

2. Explain in details about power control for reducing interference. [10]

OR

3. Discuss different techniques used for improving coverage and capacity in cellular systems.

4 Derive the equation of the Path loss using Two-Ray Model with neat diagrams. [10]

OR

5. Explain about indoor propagation models of Partition losses in same floor and between floors. [10]

6. Discuss in detail different types of small scale fading. [10]

OR

7. Explain in detail about parameters of mobile multipath channels. [10]

8. Explain the algorithms for adaptive equalization. [10]

OR

9. What are the different receiver diversity combining techniques? Explain. [10]

10.a) Explain different types of WLAN Topologies.
b) Briefly explain about the system and protocol architecture of 802.11. [4+6]

OR

11.a) What is wireless local loop and how does it work?
b) Explain and compare the media access control mechanism of DCF methods adopted in IEEE 802.11 WLAN. [4+6]

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