Code No: 128FG

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, July - 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, c as sub questions.

PART - A
(25 Marks)

1.a)	What is meant by cell splitting?	[2]
b)	Plot the signal strength for a two level handoff scheme	[3]
c)	What is meant by Ray tracing?	[2]
d)	What is Fresnel zone geometry?	[3]
e)	What is Doppler spread?	[2]
f)	Define Coherence time.	[3]
g)	What is meant by Polarization diversity?	[2]
h)	What is the purpose of an equalizer?	[3]
i)	What are the advantages of WLAN?	[2]
j)	What is a wireless PANS?	[3]

PART - B
(50 Marks)

2.a)   Explain handoff based on signal strength and C/I ratio.
  b)   Explain the concept of lowering the antenna height to decrease the co-channel interference.   [5+5]

OR

3.a)   Discuss advantages of delayed handoffs.
  b)   Briefly explain about Trunking and Grade of service.   [4+6]

4.a)   Explain Free space propagation model in detail.
  b)   Discuss in detail about the indoor propagation using Ericsson Multiple Breakpoint Model.   [5+5]

OR

5.   Explain in detail about the Okumura Model.   [10]

6.a)   Explain impulse response model of a multipath channel.
  b)   Discuss about small scale multipath parameters.   [5+5]

OR

7.a)   Discuss Clarke's model for flat fading.
  b)   What are the different time dispersion parameters? Explain.   [5+5]

8.a) What are the steps in training a Generic Adaptive Equalizer? Explain.
  b) Differentiate between Linear and Non-linear equalizer.   [6+4]

OR

9.a) With a neat block diagram explain about RAKE receiver.
  b) Describe any two algorithms used for adaptive equalization.   [5+5]

10.a) What are the enhancements of IEEE 802.16? Discuss.
   b) Enumerate briefly the different WLAN topologies.   [5+5]

OR

11.a) What are the functions of 802.11 Medium Access Control Layer? Explain.
   b) Discuss in detail about WLL.   [5+5]

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