KONERU LAKSHMAIAH EDUCATION FOUNDATION
(Deemed to be University, Estd. u/s. 3 of UGC Act 1956)

B.Tech - Odd Sem : End Semester Exam
Academic Year:2020-2021

18EC4111 - Wireless Communications

Set No: 2

Time:		**Max.Marks: 100**					
S.NO	Answer All Questions	Choice	Options	Marks	CO	CO BTL	COI BTL
1.	List out the reasons why a cell shape is assumed as hexagonal.	choice Q-2		10Marks	CO1	2	1
2.	Discuss the factors on which channel capacity depends with the help of equation.			10Marks	CO1	2	2
3.	Attempt any one question	choice Q-4		15Marks	CO1	2	1
3.A.	Discuss fixed channel assignment strategy in detail.			7.5Marks	CO1	2	2
3.B.	Explain with neat diagram illustrate handoff scenario at cell boundary.			7.5Marks	CO1	2	2
4.	Attempt any one question			15Marks	CO1	2	2
4.A.	Explain adjacent channel interference and how it can be reduced in detail.			7.5Marks	CO1	2	2
4.B.	Justify the statement “frequency reuse increases system capacity”.			7.5Marks	CO1	2	2
5.	Explain free space propagation model. Consider a wireless link, transmitter and receiver having distance 400m between them. Transmitted signal frequency is 2.4Ghz with transmitted power of 24dBm. Determine received power.	choice Q-6		10Marks	CO2	3	2
6.	Examine three basic propagation mechanisms in detail.			10Marks	CO2	3	3
7.	Attempt any one Question	choice Q-8		15Marks	CO2	3	2
7.A.	Differentiate between small scale fading and large-scale fading.			7.5Marks	CO2	3	1
7.B.	Analyze the principle of the Doppler shift with the help of equations.			7.5Marks	CO2	3	3
8.	Attempt any one Question			15Marks	CO2	3	3
8.A.	List the characteristics of flat fading in wireless channel.			7.5Marks	CO2	3	2
8.B.	Illustrate Rayleigh distribution models with the help of neat diagram.			7.5Marks	CO2	3	2
9.	Explain the need for equalizer at the receiver in wireless communication.	choice Q-10		10Marks	CO3	3	2
10.	Provide classification of space diversity and explain their working principle.			10Marks	CO3	3	2
11.	Attempt any one Question	choice Q-12		15Marks	CO3	3	3
11.A.	Illustrate polarization diversity in detail.			7.5Marks	CO3	3	1
11.B.	Demonstrate the characteristics of TDMA in brief.			7.5Marks	CO3	3	3
12.	Attempt any one Question			15Marks	CO3	3	1
12.A.	Distinguish between linear and non linear equalizer.			7.5Marks	CO3	3	1
12.B.	Illustrate the training mode of an equalizer.			7.5Marks	CO3	3	2
13.	Explain OFDM transceiver block diagram model with the help of neat diagram.	choice Q-14		10Marks	CO4	2	1
14.	Provide comparison between conventional FDM and OFDM systems.			10Marks	CO4	2	1
15.	Attempt any one Question	choice Q-16		15Marks	CO4	2	1
15.A.	Illustrate working of personal access communication system.			7.5Marks	CO4	2	2
15.B.	Explain frame structure of GSM in brief.			7.5Marks	CO4	2	1
16.	Attempt any one Question			15Marks	CO4	2	1
16.A.	Illustrate working of Personal Communication Satellite Systems.			7.5Marks	CO4	2	1
16.B.	List the silent features of GSM.			7.5Marks	CO4	2	1

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