



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

B.Tech - Even Sem : End Semester Exam
Academic Year:2021-2022

18EE4131 - Smart Grid Communication And Cyber Security

Set No: 3

Time:		Max.Marks: 100					
S.NO	Answer All Questions	Choice	Options	Marks	CO	CO BTL	COI BTL
1.	Illustrate WAN Based on Fiber Optical Network architecture with neat legible sketch	choice Q-2		10Marks	CO1	2	1
2.	Discriminate the XML-based client/server architecture with neat legible sketch for data exchange.			10Marks	CO1	2	2
3.	Answer the following questions	choice Q-4		15Marks	CO1	2	2
3.A.	Differentiate the technical description of two Bluetooth(3.0+HS &4.0) standards			7Marks	CO1	2	1
3.B.	Elaborate the protocol architecture of Zig Bee network with neat legible sketch			8Marks	CO1	2	2
4.	Answer the following questions			15Marks	CO1	2	2
4.A.	Briefly explain Fiber optical communication networks layers			7Marks	CO1	2	1
4.B.	Discriminate the major sets of components of fiber optical network			8Marks	CO1	2	2
5.	Predict the various tools used in managing traditional electric transmission and distribution and telecom networks.	choice Q-6		10Marks	CO2	3	1
6.	Illustrate the Conceptual diagram of a synchronized phasor measuring system			10Marks	CO2	3	2
7.	Answer the following questions	choice Q-8		15Marks	CO2	3	3
7.A.	Briefly discuss the need of Information Security Technologies for the Smart Grid			7Marks	CO2	3	2
7.B.	Elaborate the modern cryptography with overall structures			8Marks	CO2	3	3
8.	Answer the following questions			15Marks	CO2	3	3
8.A.	Explain the important characteristics of smart grid communications technology			7Marks	CO2	3	2
8.B.	Discuss the communications characteristics of integration and interoperability for various domains used within the smart grid			8Marks	CO2	3	3
9.	Illustrate the conceptual model of the smart grid developed by the Grid Wise Architecture Council (GWAC).	choice Q-10		10Marks	CO3	2	1
10.	Tabulate the threats facing the Traditional Electric Power System and Modernized System .			10Marks	CO3	2	2
11.	Answer the following questions	choice Q-12		15Marks	CO3	2	2

11.A.	Briefly discuss the Standards Bodies which are addressing interoperability issues for a broad range of industries			7Marks	CO3	2	1
11.B.	Discuss the benefits and Challenges of Interoperability			8Marks	CO3	2	2
12.	Answer the following questions			15Marks	CO3	2	2
12.A.	Discriminate the applications of IEC 61850			7Marks	CO3	2	1
12.B.	Elaborate trade-off points include while considering cyber security risk			8Marks	CO3	2	2
13.	Tabulate the impacts of available measurements and operations of Smart Grid	choice Q-14		10Marks	CO4	2	1
14.	Discuss the Mapping security requirements to Smart Grid environments			10Marks	CO4	2	2
15.	Answer the following questions	choice Q-16		15Marks	CO4	2	2
15.A.	Differentiate the denial-of-service attack and manipulation of service attack cyber security			7Marks	CO4	2	1
15.B.	Explain how Turning a vulnerably into a compromise			8Marks	CO4	2	2
16.	Answer the following questions			15Marks	CO4	2	2
16.A.	Draw and explain the legible sketch of security model for critical infrastructure cyber security.			7Marks	CO4	2	1
16.B.	Illustrate NISTIR 7628 Smart Grid cyber security architecture			8Marks	CO4	2	2

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