

Reg.No. _____

**Karunya UNIVERSITY**(Karunya Institute of Technology & Sciences)
(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)**End Semester Examination – Apr/May – 2017**

Code : 14EC2080
Sub. Name : Communication Engineering

Semester : 2016-17 EVEN
Duration : 3hrs
Max. marks : 100

ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.	a.	Illustrate how DSBFC –AM is generated by Square Law modulator and derive the expression to show that the output has all three components	CO2	15
	b.	Calculate the minimum height required of an antenna with frequency of 3Khz	CO2	5
(OR)				
2.	a.	Define Amplitude Modulation. Derive an expression for Amplitude Modulation with its power calculation and current relation	CO3	15
	b.	Sketch the waveform of Phase Modulation(PM) and explain.		5
3.	a.	Explain with a neat circuit diagram how AM –(DSBSC) signals are generated with the help of Balanced Modulator	CO3	15
	b.	Compare Low level and High level modulation	CO2	5
(OR)				
4.	a.	Construct a neat block diagram for AM Superhetrodyne receiver with required explanation.	CO2	10
	b.	Generate a Frequency Modulation (FM) expression using Direct Method with suitable block diagram.	CO3	10
5.	a.	Plan and prepare with a block diagram how Tuned Radio Frequency(TRF) Receiver works	CO2	10
	b.	Write short notes on a)Pulse Width Modulation(PDM) b)Pulse Position Modulation (PPM)	CO1	10
(OR)				
6.	a.	Illustrate about the circuit diagram of Envelope detector with necessary expressions	CO3	10
	b.	Infer on the Errors that can be detected and corrected in a data transmission with its types.	CO3	10
7.	a.	Describe how (PCM) Pulse Code Modulation helps in transmitting the data.	CO2	10
	b.	Differntiate between Twisted pair and Coaxial cable.	CO3	10
(OR)				
8.	a.	Generate a circuit for Pre-emphasis and De-emphasis and explain with its application.	CO1	15
	b.	The noise figure of IF amplifier is 15dbs.The amplifier is preceeded by a pre-amplifier with again of 10dbs and noise figure of 6dbs.Find the overall noise figure.	CO1	5
<u>Compulsory:</u>				
9.	a.	Discuss with a neat block diagram about the scanning process of TV Transmitter and Receiver.	CO2	20

ALL THE BEST

