



BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – B.Tech.(CSE)-2018/B.Tech.(CSE)-2019

Course Name – Digital Communication

Course Code - OEC-701B

(Semester VII)

Brainware University
Brainware Kolkata -700125

Time: 3:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

1 x 15=15

	(Multiple Choice	
1.	Choose the correct alternative from the follow	ing:
(i)	The process in which the top of each pulse in of the analog segment is analyze as	the output samples retains the shape
(ii)	a) Natural samplingc) AliasingState, Which process is more economical?	b) Ideal sampling d) None of the mentioned
(iii)	a) Undersamplingc) AliasingThe main sources of corruption observe are	b) Oversampling d) None of the mentioned
(iv)	 a) Sampling and quantizing effects c) Sampling, quantizing and channel effects The signals which are obtained by encoding each of the signals which are obtained by encoding each of the signals. 	b) Channel effects d) None of the mentioned each quantized signal into a digital word
(v)	a) PAM signalc) FM signalIn PCM encoding, quantization level varies as	b) PCM signal d) Sampling and quantization a function assciated with
(vi)	a) Frequencyc) Square of frequencyThe size of the quantile interval is nameed as	b) Amplitude d) Square of amplitude
(vii)	a) Inter levelc) Quantile sizeIn non uniform quantization, the quantizatio size.	b) Step size d) Level width n noise is calculated to signal
	a) Inversely proportional c) Equal	b) Directly proportional d) Double

b) FSK

d) GMSK

(viii) State, which modulation scheme is also called as on-off keying method?

a) ASK

c) PSK

(ix) In TDM, at the receiver end, filter is local	ated.	
a) Low pass	b) High pass	
c) Band pass	d) Band stop	
(x) Companding is choose to	a, 20110 310p	
a) Increase the information transmission rate	 b) Use only one carrier frequency to different signals 	handle
 c) To use different frequency bands for 	d) To protect all small signals in PCM	from
different signals	quantizing noise	
(xi) Choose, which has greater bandwidth?		
a) TDM	b) FDM	
c) TDM & FDM	d) None of the mentioned	
(xii) Select, which maintains better fidelity?		
a) Analog communication	b) Digital communication	
c) Analog & Digital communication	d) None of the mentioned	
(xiii) The SNR value can be increased byapplying	the number of levels.	
(liersyma) Increasing	b) Decreasing	
C) Does not depend on	d) None of the mentioned	
(xiv) A cyclic code can be generated applying	a, work or the mentioned	
a) Generator polynomial	b) Generator matrix	
c) Generator polynomial & matrix	d) None of the mentioned	
(xv) Linear codes are manage for	a, None of the mentioned	
a) Forward error correction	b) Backward error correction	
c) Forward error detection	d) Backward error detection	
Group		
(Short Answer Ty	pe Questions)	3 x 5=15
2. Compare and contrast uniform and non-uniform	quantization.	(3)
3. Explain Sampling theorem.		(3)
Write the advantage of delta modulation over pul Write a short note on delta to advantage	se modulation schemes?	(3)
5. Write a short note on delta modulation.		(3)
6. Write comparative study of DPCM, DM and ADM	signals.	(3)
OR Write the difference between block codes and cor	avalutional and 2	
the directive between block codes and cor	ivolutional codes?	(3)
Group		
(Long Answer Typ	e Questions)	5 x 8=40
7. Estimate the difference between TDM & FDM.		
8. Explain aliasing.		(5)
9. Explain QPSK with waveforms.		(5)
10. Express QPSK.		(5)
11. Explain delta demodulation technique.		(5)
12. Write a short note on PCM.		(5)
13. Represent 100111010 using following digital data AMI NRZ	format (1) Polar RZ (2) Bipolar NRZ (3	(5)) (5)
14. Explain repetitive generator.		(E)
OR		(5)
Explain the detection of PCM system		(5)
		(5)