Scheme of Valuation/Answer Key

(Scheme of evaluation (marks in brackets) and answers of problems/key)

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

V SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: CS307

Course Name: DATA COMMUNICATION

Max. Marks: 100   Duration: 3 Hours

PART A

Answer all questions, each carries3 marks.   Marks

1		Explanation with examples 1 mark each.	(3)
2		Explanation of Nyquist formula-1	(3)
		Explanation of Shannon's capacity-1	
		The Shannon capacity gives us the upper limit; the Nyquist formula tells us how many signal levels we need. – 1 mark	
3	a)	Explanation-1.5 marks	(3)
		Figure-1.5 marks	
4		Explkanation – 3 marks	(3)

PART B

Answer any two full questions, each carries9 marks.

5	a)	Explanation with required equations to determine attenuation and noise	(9)
		Attenuation-3 marks	
		Delay Distrotion-2 marks	
		Noise(different types of noises)-4 marks	
6	a)	Channel Capacity-1 mark	(5)
		Bit rate- 2 marks	
		No. of levels – 2 marks	
	b)	Comparison of terrestrial and sattelite microwave transmission (4 marks)	(4)
7	a)	Explanation -2.5 marks	(5)
		Diagram-2.5 marks	

		b)	Effective area – 2marks	(4)
			Antenna gain – 2 marks	

PART C

Answer all questions, each carries3 marks.

8		Two line coding scheme-1mark	(3)
		Reasoning-1	
		Pattern- 1 mark	
9		Explanation-3 marks	(3)
10		Explanation -1.5 marks	(3)
		Figure-1.5 marks	
11		Explanation -1.5 marks	(3)
		Figure-1.5 marks	

PART D

Answer any two full questions, each carries 9 marks..

12	a)	1 mark for each square wave	(6)
	b)	1 mark for each diagram	(3)
13	a)	Explanation-6 marks	(6)
	b)	Explanation-3 marks	(3)
14	a)	Explanation -3.5 marks	(6)
		Figure-2.5 marks	
15		Explanation -3 marks	(3)

PART-E

Answer any two full questions, each carries9 marks.

15	a)	Explanation – 5 marks	(5)
	b)	Even parity,odd parity-2	(5)
		Example-1 mark	
		Limitation-2 marks	
16	a)	i)6 marks ii) 4 marks	(10)
17	a)	i) 2.5 marks	(5)
		ii) 2.5 marks	

	b)	1 mark each	(5)
18	a)	Explanation-5 marks	(10)
		Figures- 5 marks	
19	a)	Explanation – 6 marks	(10)
		Figures- 4 marks	
20	a)	Expalnation-5 marks	(5)
	b)	Expalnation-3.5 marks	(5)
		Fig-1.5 marks	