

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSIT

08 PALAKKAD CLUSTER

Q. P. code: CSP0817121-J

(pages: 2)

Name:

Reg No:

FIRST SEMESTER M.TECH. DEGREE EXAMINATION DEC 2017

08EC6521/08EC6221 Advanced Digital Communication

Branch: Electronics and Communication Engineering

(Common to CESP &ECE)

Time:3 hours

Max.marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no.	Module 1	Marks
1.a	Explain Correlation function.	3
	Answer b or c	
b	Explain with example Rayleigh and Rician distributions.	6
С	Explain moment generating function and Gaussian process.	6
Q.no.	Module 2	Marks
2.a	What is Cauchy Schwarz inequality?	3
	Answer b or c	
b	Explain briefly about optimum receiver for signals corrupted by AWGN channel with example.	6
С	Explain the frequency domain interpretation of matched filter.	6
Q.no.	Module 3	Marks
3.a	What is ML criterion?	3
	1.a b c Q.no. 2.a b c	1.a Explain Correlation function. Answer b or c b Explain with example Rayleigh and Rician distributions. c Explain moment generating function and Gaussian process. Q.no. Module 2 2.a What is Cauchy Schwarz inequality? Answer b or c b Explain briefly about optimum receiver for signals corrupted by AWGN channel with example. c Explain the frequency domain interpretation of matched filter. Q.no. Module 3

Answer b or c

b	Explain probability of error for envelop detection of M-ary orthogonal signals.	U
C	Explain optimum detector for binary signals with example.	6
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2.no.	Module 4 JA 9 89	Marks
4.a	Explain fading multipath channel.	a. 12 1 . a. 3 . O
	Answer b or c	
b	Explain Rayleigh fading channel.	6
С	Explain statistical model of fading channel.	6
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Q.no.	Branch: hicer 5 bhodule 5 too a manarate Fugineering	Marks
5.a	Explain non-coherent detection	4
	Answer b or c	
00 : 6 1	Explain optimum non-coherent detection.	State: Though
С	Explain performance of BPSK over wireless channels.	8
	Answer relation used to located to location with	
Q.no.	Module 6	Marks
6.a	What is the need of equalizer?	4
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8 b	Explain two types of equalizers.	8 - (10.00)
c	Explain symbol synchronization in signal demodulation.	8
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