

#### PARSHVANATH CHARITABLE TRUST'S

## A.P. SHAH INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering
Data Science

Semester		_ s	ubject :D	SGT	А	cademic Year: 2	022-2023		
* Ex	amples	00 0	naximo	um like	elihood	deco	ding		
	nique	Charles,	S.5 Maga		. 180 (5)	1965	0		
09,486		100	is on	11 15 11		2474 A	yer the e		
12 Consider the (3,6) encoding function									
e: B3 > B6 defined by									
e(000)=000000 e(001)=001100									
e(010) = 010011 e(011) = 011111									
e(100) = 100101 e(101) = 101001									
6	2(116)	= 11	0110	e(	[111] =	111010			
dece	de te	re fo	Howin	ej wo	rds r	elarive	to a		
max	imum	likeli	hood	decodi	ug of	unctio	n		
	101000		No. T. in	1.60 21	.0. 0	3 28 22			
_ b)	010101	*, ( ) h l	Jan John	0.0			Jan Jan		
>		distribution.	(50)			i sillo			
Prepare decoding table.									
			U						
000000	001100	010011	011111	100 101	10100	1/110/10	111010		
000001	001101	010010	011110	100 100	101000	1110111	[1101]		
000010	001110	010001	011101	100/11	101011	110100	111000		
00000	0000	1111010	011011	100001	101101	110010	111110		
0,000	011100	110000	001111	110101	111001	100110	101010		
00000	10 1106	9 10011	111111	000101	001001	010110	011010		
600110	001010	010101	01/001	100011	101111	110000	111100		
010100	011000	000111	00/01/	110001	111101	100010	101110		
				11/100		1/			



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Semester :	s	ubject :	TP CI	-	Academ	ic Year: 20	- 20
a) 00010	1	(da li)	Mills Plan	P Sugar	Laois		NO TO
If all	receius	, the	word	000	101,	we d	ecode
_it key t	first lo	eating	it is	7 ten	e dece	ding	table
It appe	dus ir	1 the	5th	colu	mn, c	her	e it
It apper	estined	1. The	wor	d at	+ tere	top	01
the 5th	' colur	na is	100	101.	Since	ėc	1000 =
100101	we d	ecode	000	10/1	as 100		
b) 01010	10) = (	1010		101	3012	CARL	
b) 01010	0].	111010	()			<u> </u>	
If a	se reco	eive H	ne w	1000	01010	1, we	2 finst
locate it							
table, w	here i	t is c	indes	linea	1 to	c6.	the
is olool	t the	top	of t	he.	third	Colu	mo
15 01001	1. Sir	ice e	(010)	) = 0	IODII.	uce	decode
010101	ds 0	(0.				1, 12, 12, 12, 12	
		W-				1	4
of of Alet	0.14 10.001	313 191	De Jaja L				
			27 14 1 17				1
The All Day							
O VAT OF							
10 to 100 101							
opolitica pl					All and I		
GATHER BO	334 111	1013 U	par II		119		
	Jan 18 (D)	1111	No.		14000	(Chenedal)	Albani (* 18

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Ser	nester :		Subject :	111		Academic Year: 20 - 20			
(2)	Cons	ider +	ne (3	· 5) q	oup	encod	ing fun		
	6: B3	$\rightarrow 8^5$	define	ed by	- Inyon in	411			
9	(000)	= 0000	0	3			3/41/3/		
6	(010)	= 0100			Spert	101 19	THE PARTIES		
_6	2 (100)	= 1001	1	eas Col					
	e (110)	= 110	10	1000	1		102		
	e (001)	) = 601	10						
	e (011	) = 0111	1	100		101			
- 10	e Cloi	= 1010	)		3274				
	e(iii)	= 1110	0	7.01	1 5 YM	The state	BL. I		
Decode the following words relative to a									
m	axima	m like	elihood	deco	ding	fun	- ///		
maximum likelihood decoding fun.  a) 11001 b) 01010 c) 00111									
						11. 60			
>(	Pre	epare a	decodin	a tab	le:-	VI-			
000	001	. 010	011	100	101	110	10111		
	00110	01001	01111	10011	10101	11010	11100		
	00111	01000	01110	10010	10100	11010	11191		
0010			01101	10001	10111	11000	11110		
000	0000	01101	01011	10111	10001	11116	11000		
1000	01110	0000	00111	11011	11101	10010	10100		
000	10110	11001	[111]	80011	00101	01010	61100		
1000	10111	11000	11110	00000	00100	01011	01101		
0010	10100	11011	11101	10000	00111	01000	01110		
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Semester : 111	Subject :_	DSGT		Academic Ye	ar: 2022 - 202	3
11001. If we locate it table. 10	here it	15 ch	demin	ed out	e. The	)
word at	the top	10) = (010)	olool .	colum	00 19	
we d	ecode 1	1001	as	010		
11010 111	)			110 = (	11035	
If we	receive .	the w	and c	01010, u	re firs	7
locate it						
table with word at	the too	5 und	re 7th	colum	n is	
11010. Si	nce ec	= C011	11010	· ue o	lecode	
01010 as	110 -			and the state of t		
ii/ Similar	v 00111	is lo	cared i	n 2nd	colum	20
of the de	coding -	table	when	2 it is	unde	rlined
thrice. Th	e word	at th	e top	of t	ere 2	nd
column i	5 00110.	Sinc	e ec	0019 =	00110	Siber
us decoc	le 0011	105	001.	10011-20		- Telen
- OF 15 1 - 0	> My folding				0.111.0	
Date No	15104	Hope	31411	ale di	1011118	
	cla only	1000	0.1311	10.31	191.3	Mar of
	E PARTO	10000	10111	311 91	DOTAL	of body
		100				

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