777	DR. B	ABASA	HEB AN	1BEDK	AR TEC	CHNOLO	OGICAL	UNIVE	RSITY, LON	NERE	M H
				Sun	mer Ex	aminatio	n – 2023				
	Course: SY B.Tech. Branch : Computer Science and Allied Engineering Semester										
	:IV										55.79
1	Subject Code	& Name	e: Proba	bility a	nd Statis	stics	BTBSC40)4			
	Max Marks: 6				te:26/07/			D	uration: 3	Irs.	2
	questic 3. Use of	question vel of que on is base non-pro	ns are con estion/exp ed is men grammab	pected an tioned in ble scien	nswer as n () in fre tific calc	ont of the ulators ts	question. allowed.		tcome (CO)	on which the	
	4. Assum	e suitabl	e aata wi	ierever i	iecessary	ana mei	nnon n cre	arty.		(Level/CO)	Mark
Q. 1	Solve Any Tw	o of the	following	σ.			8			CO1	12
(A)	State and Prov				Probah	ilitv"					(
	THE COMPLETION OF THE PARTY OF	and a second			Control Line Control Control		ent such ti	hat			(
(8	If A & B are two possible outcomes of a random experiment such that $P(\bar{A}) = 0.6$, $P(A \cup B) = 0.7$ and $P(B) = k$, then find value of "k" if (i) A & B are mutually exclusive (ii) A & B are independent										
	the factory F_2 5000 articles,5 put in one stoc factory F_1 .	0 of then	n being d	efective.	If one ar	rticle is c	hosen from	n all thes	se articles		
Q.2	Solve Any Tw	o of the	following	g.						CO2	12
A)	A random	DANG-SHIP CO.		HE CO.	ng distrib	oution:					6
	X:			2 3	-		5	6			
1000	P(X):	2k	4k	61	c	8k	10k	12k			
16.27	Determine (i) k (ii) $P(X < 4)$ (iii) $P(2 \le X < 5)$										
			12-3		S . S						
B)	Fit the Binomi	TF T	6								
	X:	0	1	2	3	4					
	F:	28	62	46	10	4					
C)	In a sample of Obtained by th normal find the (i)between 12: [Given:For a S between z = 0 z = 0 to z = 2	ne student e number and 15,(i i.N.V. z a 0 to z = 0	ts in a cer of studenti) above the area between 0.8 is 0.2	rtain test nts gettir 18,(iii) b een z =	are 14 and marks elow 8 0 to z =	0.4 is 0.	ssuming t	he distril			
Q. 3	Solve Any Tw	o of the	following	ţ.						CO3	12

was.	Define "Karl Pearson's Correlation Coefficient". Also show that $-1 < r < +1$.										6		
B)	For the following data,												6
	X:	6	8	12	15	18	20	24	28	31			
9	Y:	10	12	15	15	18	25	22	26	28			
	Calcula	ate (i) K	arl Pear	son's co	efficier	nt of co	rrelation			_			
F		ndard E											
	2012	bable E	10000	70			.7%						
0	3			1	clost (a	\ fort	ne follow	ing dat	3			A TOTAL OF THE PARTY OF THE PAR	6
(C)	X	68	64	75	50	64	80	75	40	55	64		F
100	Y	62	58	68	45	81	60	68	48	50	70		
		-	1				-			-			
	Calma	A man Thomas	6 ()	C-11t								C04	12
Q.4		Solve Any Two of the following.								004	172		
A)													
3	X	91	97	108	97	70	91	39	73 61	80	47		
B)	477						uations o	1000000	17.77	11/2/2005	d v .the		
D)							diam'r.						
3 3	followi	ing resul	its were	obtained	$1:\overline{x}=$	90;							
	$\overline{\nu} = 70$	0: n = 1	$0: \Sigma x^2$	= 6360	Σv^2	= 286	$0, \sum xy$	= 3900), where	x and y	are the	June 1	
	-		200				the equa						
(C)		nine whi	ch one o	of the to	Howing			or Transport	Far an w				10
-,	Av - 5							n line o	f y on x	;			
,		y + 30	= 0;20	x - 9y				n line o	f y on x				•
-			= 0;20	x - 9y				n line o	f y on x				
	find r _x	y + 30 yand σ_y	= 0; 20 when σ	x - 9y $x = 3$	- 107 :			n line o	f y on x			C05	
2.5	find r_{xy}	$y + 30$ yand σ_y Any Tw	= 0; 20 when σ	x - 9y $x = 3$ followin	– 107 :	= 0. Al	so,					C05	12
	find r_{xy}	$y + 30$ yand σ_y Any Tw	= 0; 20 when σ	x - 9y $x = 3$ followin	– 107 :	= 0. Al	so,				thesis that	C05	1
2.5	Solve A coin the coin	$\delta y + 30$ yand σ_y Any Tw was tos	= 0; 20 when σ o of the sed 200 iased at	x - 9y = 3 following times are 5% lever	ng.	ead turn	ned up 10	08 time	s. Test t	he hypot		COS	1
(). 5 A)	Solve A coin the coin	$\delta y + 30$ yand σ_y Any Tw was tos	= 0; 20 when σ o of the sed 200 iased at	x - 9y = 3 following times are 5% lever	ng.	ead turn	ned up 10	08 time	s. Test t	he hypot		C05	1
Q. 5 A)	Solve A A coin the coin	y + 30 y and σ_y Any Tw was tosen is unborded of 10	= 0; 20 when σ o of the sed 200 iased at	x - 9y $x = 3$ following times are $5%$ leve ic bulbs	ng. Ind the h	ead turnificance	ned up 10	08 time	s. Test t	he hypota	ife time of	COS	1
). 5 A)	Solve A A coin the coin A samp	y + 30 y	e 0; 20 when σ of the sed 200 iased at 00 electron a stand	x - 9y $x = 3$ following times are 5% leve ic bulbs lard devi	ng. Ind the half of sign production of	ead turnificanced by n	ned up 10 ee. nanufactuurs. A sa	08 time	s. Test t howed a	he hypota mean l	ife time of	C05	1
(). 5 A)	Solve A A coin the coin A samp 1190 h manufa	y + 30 y	e 0; 20 when σ of the sed 200 iased at 00 electron a stand 3 shower	x - 9y $x = 3$ following times are 5% leve ic bulbs lard deviated a mean	ng. Ind the half of sign production of a life time.	ead turnificance ed by no f 90 hou	ned up 10 ee. nanufactuurs. A sa 230 hour	08 time urer A s mple of s with t	s. Test t howed a '75 bulk he stand	he hypota a mean l os produ	ife time of ced by lation of	COS	1
(). 5 A)	Solve A A coin the coin A samp 1190 h manufa	y + 30 y	e 0; 20 when σ of the sed 200 iased at 00 electron a stand 3 shower	x - 9y $x = 3$ following times are 5% leve ic bulbs lard deviated a mean	ng. Ind the half of sign production of a life time.	ead turnificance ed by no f 90 hou	ned up 10 ee. nanufactuurs. A sa 230 hour	08 time urer A s mple of s with t	s. Test t howed a '75 bulk he stand	he hypota a mean l os produ	ife time of	C05	1
Q. 5 A)	Solve A A coin the coin A samp 1190 h manufa 120 ho	y + 30 y	o of the sed 200 iased at 00 electron a standard a shower a di	x - 9y $x = 3$ following times are 5% leve ic bulbs lard deviated a mean	ng. Ind the half of sign production of a life time.	ead turnificance ed by no f 90 hou	ned up 10 ee. nanufactuurs. A sa 230 hour	08 time urer A s mple of s with t	s. Test t howed a '75 bulk he stand	he hypota a mean l os produ	ife time of ced by lation of	COS	1
). 5 A)	Solve A A coin the coin A samp 1190 ho manufa 120 ho i) at 59	y + 30 y	e 0; 20 when σ of the sed 200 iased at 00 electron a stand of significant of significant control of significant c	x - 9y $x = 3$ following times are 5% leve ic bulbs lard deviated a mean fference fference	ng. Ind the half of sign production of a life time.	ead turnificance ed by no f 90 hou	ned up 10 ee. nanufactuurs. A sa 230 hour	08 time urer A s mple of s with t	s. Test t howed a '75 bulk he stand	he hypota a mean l os produ	ife time of ced by lation of	COS	1
Q. 5 A) B)	Solve A A coin the coin 1190 h manufa 120 ho i) at 59 ii) at 19	$\sin y + 30$ $\sin x \cos y$ Any Tw was tos n is unbi- ple of 10 ours and acturer F urs. Is the % level of	of the sed 200 iased at 00 electron a stand 3 showenere a direct of significant of significant and significant	x - 9y $x = 3$ following times are 5% leve ic bulbs lard deviated a mean fference icance ficance	ng. I of sign production of a life tire between	ead turn nificance ed by n f 90 hou me of 12	ned up 10 nee. nanufactuurs. A sa 230 hour nean life	08 time urer A s mple of s with t	s. Test to howed a 75 bulk he stand	he hypota a mean l os produ lard dev	ife time of ced by iation of gnificance	COS	12
Q. 5	Solve A A coin the coin 190 h manufa 120 ho i) at 59 ii) at 19	$\sin y + 30$ $\sin x \cos y$ Any Tw was tose is unbi- ple of 10 ours and acturer F ours. Is the % level of ty A, 20	of the sed 200 iased at 00 electronal a stand 3 showenere a diof signiful of s	x - 9y $x = 3$ following times are 5% leve ic bulbs lard deviated a mean fference ficance ficance france	ng. I of sign production of life tire between sample	ead turnificance ed by no f 90 hours of 12 en the no	ned up 10 ee. nanufactuurs. A sa 230 hour nean life	08 time urer A s mple of s with t time of	s. Test to howed a 75 bulb he stand two has	he hypota a mean l os produ- lard dev ads is si	ife time of ced by iation of gnificance	COS	12
Q. 5 A) B)	Solve A Solve A A coin the coin the coin 1190 h manufa 120 ho i) at 59 ii) at 19 In a cit defect.	Any Tw was tose n is unbi- ple of 10 ours and acturer F urs. Is the level of ty A, 20 In anoth	of the sed 200 iased at 00 electron a stand 3 showenere a diof signiful of signiful of a signiful of	x - 9y $x = 3$ following times are 5% leve ic bulbs lard deviated a mean fference ficance ficance frandom B, 18.5	ng. I of sign production of a ration of a	ead turnificance ed by not proposed for the not pro	ned up 10 ee. nanufactuurs. A sa 230 hour nean life	08 time furer A s mple of s with t time of	s. Test to howed a 75 bulk he stand two has	he hypota a mean l os produ- lard dev ads is si	ife time of ced by iation of gnificance	COS	12
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