3.	LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 60	0 03	4
	<b>B.B.A.</b> DEGREE EXAMINATION – <b>BUSINESS ADMINISTRA</b>	TION	
	SECOND SEMESTER – APRIL 2022		
LUCE	UBU 2502 – BUSINESS STATISTICS		
	(21 BATCH ONLY)		
Da	te: 18-06-2022 Dept. No. Max	x · 10	0 Marks
	ne: 01:00 PM - 04:00 PM		
	SECTION A		
Answe	er ALL the Questions in one or two sentences		
1.	Define the following 5 * 1	l = 5 m	arks
i.	Sampling	K1	CO1
ii.	Average	K1	CO1
iii.	Range	K1	CO1
iv.	Regression	K1	CO1
v.	Components of Time series	K1	CO1
2.	Fill in the blanks5 *	1=5 ma	arks
i.	All data generating sources which fall outside the ambit of organization are	K1	CO1
	called		
ii.	is the middle value in a distribution arranged in ascending or	K1	CO1
	descending order.		
iii.	Percentiles divides the data into parts.	K1	CO1
iv.	A line fitted by the method of least squares is the	K1	CO1
v.	variations are random fluctuations and do not fall under	K1	CO1
	any of the three components and are completely unpredictable.		
3.		* 1=5 1	marks
i.	Index makes the diagram confusing.	K2	CO1
ii.	The sum of deviations of all observations from the arithmetic mean is always	K2	CO1
	Zero.		
iii.	Evenly spread distribution will be symmetrical.	K2	CO1
iv.	Simple correlation will have only one variable studied.	K2	CO1
v.	Of the four types of variation, seasonal is the most difficult to predict.	K2	CO1
4.		* 1=5	
i.	Method of Least Squares Data vary widely	K2	CO1
ii.	Spearman's rank correlation Line of Best Fit	K2	CO1

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iii.	Percentiles				P (1	Rho)					K2	CO1
iv.	Geometric Mean	1			100	equal	parts				K2	CO1
v.	Broken bar diag	ram			√Ari	thmetic	Mean	x Harmo	onic m	ean	K2	CO1
				SI	ECTIO	N B						
nsw	er any TWO of th	ne follov	ving						(2	* 10 =	= 20 m	arks)
5.	Explain differen	t data co	ollection	n metho	ods.						K3	CO2
6.	Compute the Geometric mean for the following data:									K3	CO2	
			10-	20-	30-	40-	50-	-				
	Marks	0-10	20	30	40	50	60					
	No of students	3	8	15	20	10	4					
7.	Calculate mean	deviatio	n about	the me	edian an	d its co	efficier	nt for the	e follov	ving	K3	CO2
	data:	X	1	0 11	13	14	12					
		F		3 12	2 12	3	18					
8.	The following	tables	gives	the ag	es (X)	of Ca	ırs in	years a	nd an	nual	K3	CO2
	maintenance cos		-	-				-				
							9					
		Х		1 3	5	7	9					
		X Y	1:			7 23	22					
	Examine the ma	Y	1:	5 18	21	23	22	ding the	regres	sion		
	Examine the ma	Y	1:	5 18	21	23	22	ding the	regres	sion		
		Y	1:	5 18 for a 4	21	23 d car a	22	ding the	regres	sion		
Answe		Y	1: ce cost	5 18 for a 4	-year-ol	23 d car a	22	ding the			= 20 m	arks)
Answe	equation.	Y aintenan	1: ce cost ving	5 18 for a 4 SI	-year-ol	23 d car a N C	22 fter find		(2		= <b>20</b> m K4	arks)
	equation. er any TWO of th	Y aintenan	1: ce cost ving	5 18 for a 4 SI	21 -year-ol ECTIO	23 d car a N C	22 fter find		(2 ion.			
	equation. er any TWO of th Illustrate a histo	Y aintenan ne follow gram an	1: ce cost ving d freque	5 18 for a 4 SI ency cu	21 -year-ol ECTIO	23 d car a N C the foll	22 fter find	listributi	(2 ion.	* 10 =		
9.	equation. er any TWO of th Illustrate a histo Mid Value	Y aintenan ne follow gram an 18 10	1: ce cost ving d freque 25 15	5 18 for a 4 SI ency cu 32 32	ECTIO	23 d car a N C the foll 39 42	22 fter find owing c 46 26	listributi 53 12	(2 ion.	* <b>10</b> = 60 9		
9.	equation. er any TWO of th Illustrate a histo Mid Value Frequency	Y aintenan ne follow gram an 18 10 students	1: ce cost ving d freque 25 15 s, 10 hav	5 18 for a 4 SI ency cu 32 32 ve faile	ECTIO	23 d car a N C the foll 39 42 heir ave	22 fter find owing d 46 26 rage ma	listributi 53 12 urks is 25	(2 ion. 5. The	* <b>10</b> = 60 9 total	K4	CO3
	equation. er any TWO of th Illustrate a histo Mid Value Frequency In a class of 50	Y aintenan ne follow gram an 18 10 students oy the er	1: ce cost ving d freque 25 15 s, 10 hav	5 18 for a 4 SI ency cu 32 32 ve faile	ECTIO	23 d car a N C the foll 39 42 heir ave	22 fter find owing d 46 26 rage ma	listributi 53 12 urks is 25	(2 ion. 5. The	* <b>10</b> = 60 9 total	K4	CO3
9.	equation. er any TWO of the Illustrate a histon Mid Value Frequency In a class of 50 marks secured be	Y aintenan ne follow gram an 18 10 students oy the er passed.	time cla	5 18 for a 4 SI ency cu 32 32 ve faile ss is 28	ECTIO	23 d car a N C the foll 39 42 heir ave nclude	22 fter find owing d 46 26 rage ma with the	listributi 53 12 urks is 25	(2 ion. 5. The	* <b>10</b> = 60 9 total	K4	CO3
9.	equation. er any TWO of the Illustrate a histo Mid Value Frequency In a class of 50 marks secured be those who have	Y aintenan ne follow gram an 18 10 students oy the er passed.	tire cla	5 18 for a 4 SI ency cu 32 32 ve faile ss is 28 ession a	21 -year-ol ECTIO	23 d car a N C the foll 39 42 heir ave nclude	22 fter find owing c 46 26 rage ma with the	listributi 53 12 urks is 25 e averag	(2 ion. 5. The e mark	* <b>10</b> = 60 9 total	K4 K4	CO3 CO3
9.	equation. er any TWO of th Illustrate a histo Mid Value Frequency In a class of 50 marks secured b those who have Compare and Co	Y aintenan ne follow gram an 18 10 students oy the er passed.	tire cla	5 18 for a 4 SI ency cu 32 32 ve faile ss is 28 ession a	21 -year-ol ECTIO	23 d car a N C the foll 39 42 heir ave nclude	22 fter find owing c 46 26 rage ma with the	listributi 53 12 urks is 25 e averag mi avera	(2 ion. 5. The e mark	* <b>10</b> = 60 9 total	K4 K4	CO3 CO3

Answ	er any One of t	the fol	lowing	5							(1 * 2	20 =	20 ma	rks)
13.	Predict the m		-	-	ng data	using	group	oing an	nd ana	lysis ta	`		K5	CO4
					n					n	-			
	Classister	1	0.5	5 10	10-			20-	25-	30-	35			
	Class interv		0-5	5-10	15	20		25	30	35	40			
1.4	Frequency		9	12	15	16		17	15	10	13		V.5	
14.	The percenta entertainment												K5	CO4
	Year	200	1	200	2	200	)3	20	04	200	)5	]		
	Х	24		27		31		3	2	20	)			
	Y	11		8		5			3	1.	3	1		
	Year	200	6	200	7	200	)8	20	09	20	10	1		
	Х	25	5	33		30	)	2	8	22	2			
	Y	10	)	2		7		Ç	9	2				
	(i) Pearson's (ii) Spearman									ŕ	lts.			
					coeffi	cient a	nd con			ur resu	lts. <b>0 ma</b>	rks)		
	(ii) Spearman	ı's ranl	corre	lation	coeffi		nd con			ur resu	0 ma			
	(ii) Spearman	i's rank	c corre	lation	coeffi SI	cient a	nd con	nment		ur resu	0 ma		20 ma	<i>,</i>
Answo 15.	(ii) Spearman er any One of t Formulate Pe	i's rank	c corre	lation	coeffi SI	cient a	nd con	nment		ur resu	0 ma			<i>,</i>
	(ii) Spearman er any One of t Formulate Pe Demand	the fol	c corre	lation g	coeffi SI for th	ECTIC e follo	nd con	nment lata:	t on yo	ur resu (1	0 ma		20 ma	<i>,</i>
	(ii) Spearman er any One of t Formulate Pe Demand (Kg)	the fol arson's	lowing s co-ef	ficient	si for th	ECTIC e follo	$\frac{1}{130}$	lata:	50 16	ur resu (1	0 ma		20 ma	<i>,</i>
	(ii) Spearman er any One of t Formulate Pe Demand (Kg) Price (Rs.)	the fol arson': 85 15	lowing s co-ef	ficient 95 20	coeffic SI for th 105 24	ECTIC e follo	$\frac{1}{130}$	lata:	50 16	ur resu (1	0 ma		20 ma	<i>,</i>
15.	(ii) Spearman er any One of t Formulate Pe Demand (Kg) Price (Rs.) And also find	the fol arson': 85 15 d the p	c corrections correction for the second correction of the second correc	ficient 95 20 e error	si for th 105 24	ECTIC e follo 5 120 30	$\frac{\text{ON E}}{130}$	lata:	50 16 50 5	ur resu (1	0 ma	20 =	<b>20 ma</b> K6	CO5
	(ii) Spearman er any One of t Formulate Pe Demand (Kg) Price (Rs.)	the fol arson's 85 15 d the p five y	lowing s co-ef 93 18 robabl rearly	ficient 95 20 e error moving	sI for th 105 24 g aver	ECTIC e follo 5 120 30 rage of	$\frac{1}{2}$	lata:	t on yo 50 16 0 5 eage i	ur resu (1	0 ma (1 * 2	20 =	<b>20 ma</b> K6	CO5
15.	(ii) Spearman er any One of t Formulate Pe Demand (Kg) Price (Rs.) And also find Compose the	the fol arson's 85 15 d the p five y	lowing s co-ef 93 18 robabl rearly	ficient 95 20 e error moving	sI for th 105 24 g aver	ECTIC e follo 5 120 30 rage of	$\frac{1}{2}$	lata:	t on yo 50 16 0 5 eage i	ur resu (1	0 ma (1 * 2	20 =	<b>20 ma</b> K6	CO5
15.	(ii) Spearman er any One of t Formulate Pe Demand (Kg) Price (Rs.) And also find Compose the following dat	the fol arson's 85 15 d the p five y a. Plot	c corrections for the second s	ficient 95 20 e error movin oh of ac	si for th 105 24 g aver ctual d	ECTIC e follo 5 120 30 rage of lata and	N E wing c ) 130 35 The te d the tr	lata: ) 15 40 ea acr rend l	t on yo	ur resu (1	0 ma (1 * 2 from	20 =	<b>20 ma</b> K6	CO5
15.	(ii) Spearman er any One of t Formulate Pe Demand (Kg) Price (Rs.) And also find Compose the following dat Year	the fol arson's 85 15 d the p five y a. Plot	c corrections for the second s	ficient 95 20 e error movin oh of ac	si for th 105 24 g aver ctual d	ECTIC e follo 5 120 30 rage of lata and	N E wing c ) 130 35 The te d the tr	lata: ) 15 40 ea acr rend l	t on you 50  16 0  5 eage in ine of 8	ur resu (1	0 ma (1 * 2 from	<b>20</b> =	<b>20 ma</b> K6	rks) CO5
15.	(ii) Spearman er any One of t Formulate Pe Demand (Kg) Price (Rs.) And also find Compose the following dat Year Area in	the fol arson's 85 15 d the p five y a. Plot	c corrections for the second s	lation of action	si for th 105 24 g aver ctual d 4	ECTIC e follo 5 120 30 age of data and 5	nd con $\overline{\mathbf{DN E}}$ wing c 13( 35 $\overline{\mathbf{C}}$ the te d the tu $\overline{6}$	himent lata: ) 15 40 ea acri rend 1 7	t on you 50  16 0  5 eage in ine of 8	ur resu (1	0 ma (1 * 2 from ne. 10	<b>20</b> =	<b>20 ma</b> K6	COS