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#### **Enrolment No:**



# UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

## **End Semester Examination, May 2022**

Course: Business Statistics

Program: BBA ALL, Int. BBA-MBA(CORE)

Semester: 2<sup>nd</sup>
Time: 03 hrs.

Course Code: DSQT1004 Max. Marks: 100

### **Instructions:**

### SECTION A 10Ox2M=20Marks

S. No.		10Qx2M=20Marks Marks	СО
Q 1	Choose an appropriate answer.	1.202.20	CO1
Q I	(i) The algebraic sum of their arithmetic mean (a) Equal to one (b) Always zero (c) Product of the value (d) Equal to median  (ii) For symmetrical districal mean (a) Mean=Median	ibution Mode Iode Mean Iode st popular statistical measure that e relationship exist onship within the variables (Direct or rong or weak  are 5 and 16 respectively then on is	CO1
	(a) Mean=Median	i uaia	

		<ul><li>(b) Mean<median< li=""><li>(c) Mean&gt;Median</li></median<></li></ul>		
		(d) Mean is zero		
	(vi)	What is the mean deviation about mean of the data 2,9,9,3,6,9,4? (a) 2.23 (b) 2.57 (c) 3.23 (d) 3.57		
	(vii)	Which of the following is an ideal measure of dispersion,  (a) Range  (b) Standard deviation  (c) Quartile deviation  (d) Mean deviation		
	(viii)	The range of probability for an event E is  (a) $P(E) \ge 1$ (b) $P(E) \le 0$ (c) $0 \le P(E) \le 1$ (d) $-1 \le P(E) \le 1$		
	(ix)	A process by which we estimate the value of dependent variable on the basis of one or more independent variable is called  (a) Measure of central tendency (b) Measure of dispersion (c) Regression (d) Correlation		
	(x)	Which of the following method is not a method of collection primary data?  (a) Questionnaires (b) Interviews (c) Data collected for published sources (d) All are primary data methods		
		SECTION B		
	T	4Qx5M= 20 Marks		
0.11		e following question.		002
Q.11	What do y collection.	ou mean by data? Discuss any two method of primary data	5	CO2
Q. 12		y five requisites of an ideal measure of central tendency.	5	CO2

1 2 3 4 5 Iculate mean, ues of mean,	ble indicates by a second ble indicates by a	eviates	s the n	or the state that the	BECT: 10M= obtain he data	iven elatio ION- 30 M ned b Num a give	on coef  Aarks  by 30 st  ber of  2  6  9  7  4  2  en about metry	tuden stude ve. B	ents  ased ce data.	on the	5 10	CO2 CO3
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ues of mean, a	median	and 1	mode	discu	iss the	sym	metry	of the	e data.			
ues of mean, a	median	and 1	mode	discu	iss the	sym	metry	of the	e data.			
	ata show	vs the	a ruoic	1-4	d blac	,		of fiv	ie nero	sons		
<u>Person</u>			The following data shows the weight and blood pressure of five persons.									
			Weight				Blood Pressure					
A				150				12				
<u>B</u>				169						10	COL	
									10	CO3		
		+										
						•						
											10	CO2
								10	CO3			
d the probabil	my mai	bour	i tile t									
Following data shows age (X, in years) and blood pressure (Y).												
56 42		39	63	47	52	49	40	42	68	60		
127 112	140	118	129	116	130	125	115	120	135	133		
<u> </u>								4		CO4		
<u> </u>								ret	5			
(c) Can we e	stimate			-		_	-	ged 20	0 year	s on	5	
) r	C D E  culate the corag contains 5 n the bag. Agd the probabitation of t	C D E  culate the correlation ag contains 5 white bear again, and the probability that  lowing data shows aga 56 42 72 127 112 140  (a) Calculate the two (b) Calculate correlation your result.  (c) Can we estimate	C D E  culate the correlation coe ag contains 5 white balls and the bag. Again, another definition the bag and the probability that both lowing data shows age (X)    56   42   72   39     127   112   140   118     (a) Calculate the two equals (b) Calculate correlation your result.   (c) Can we estimate the lower correlation to the lower correla	C D E  culate the correlation coefficier ag contains 5 white balls and 8 m the bag. Again, another one id the probability that both the base belowing data shows age (X, in years)  lowing data shows age (X, in years)    Solution   Solution	C 175 D 180 E 200  culate the correlation coefficient and ag contains 5 white balls and 8 black in the bag. Again, another one is drawd the probability that both the balls of	C 175 D 180 E 200  culate the correlation coefficient and interpage contains 5 white balls and 8 black balls. In the bag. Again, another one is drawn with the probability that both the balls drawn  SECT:  2Qx15M=  lowing data shows age (X, in years) and by 56 42 72 39 63 47 52  127 112 140 118 129 116 130  (a) Calculate the two equation of regression (b) Calculate correlation coefficient between your result.  (c) Can we estimate the blood pressure of	C 175 D 180 E 200  culate the correlation coefficient and interpret yag contains 5 white balls and 8 black balls. One in the bag. Again, another one is drawn without the probability that both the balls drawn are yages and blood 2Qx15M=30 March 127 112 140 118 129 116 130 125  (a) Calculate the two equation of regression line (b) Calculate correlation coefficient between your result.  (c) Can we estimate the blood pressure of a person of the probability of the probability that both the balls drawn are yellow and the probability that both the balls drawn are y	C 175 D 180 E 200  culate the correlation coefficient and interpret your reag contains 5 white balls and 8 black balls. One ball is not the bag. Again, another one is drawn without replaced the probability that both the balls drawn are white.  SECTION-D 2Qx15M= 30 Marks  lowing data shows age (X, in years) and blood pressures before the probability of t	C 175 16 D 180 16 E 200 15  culate the correlation coefficient and interpret your result. ag contains 5 white balls and 8 black balls. One ball is drawn the bag. Again, another one is drawn without replacing to the probability that both the balls drawn are white.  SECTION-D 2Qx15M= 30 Marks  lowing data shows age (X, in years) and blood pressure (Y 56 42 72 39 63 47 52 49 40 42 127 112 140 118 129 116 130 125 115 120  (a) Calculate the two equation of regression line. (b) Calculate correlation coefficient between X and Y and your result. (c) Can we estimate the blood pressure of a person aged 2	C 175 160 D 180 169 E 200 150  culate the correlation coefficient and interpret your result. ag contains 5 white balls and 8 black balls. One ball is drawn at rann the bag. Again, another one is drawn without replacing the first determined the probability that both the balls drawn are white.  SECTION-D 2Qx15M= 30 Marks  lowing data shows age (X, in years) and blood pressure (Y).  56 42 72 39 63 47 52 49 40 42 68  127 112 140 118 129 116 130 125 115 120 135  (a) Calculate the two equation of regression line. (b) Calculate correlation coefficient between X and Y and interpression result. (c) Can we estimate the blood pressure of a person aged 20 year	C 175 160 D 180 169 E 200 150  culate the correlation coefficient and interpret your result. ag contains 5 white balls and 8 black balls. One ball is drawn at random in the bag. Again, another one is drawn without replacing the first ball. In the probability that both the balls drawn are white.  SECTION-D 2Qx15M= 30 Marks  lowing data shows age (X, in years) and blood pressure (Y).    56   42   72   39   63   47   52   49   40   42   68   60     127   112   140   118   129   116   130   125   115   120   135   133    (a) Calculate the two equation of regression line. (b) Calculate correlation coefficient between X and Y and interpret your result. (c) Can we estimate the blood pressure of a person aged 20 years on	C 175 160 D 180 169 E 200 150  culate the correlation coefficient and interpret your result. ag contains 5 white balls and 8 black balls. One ball is drawn at random in the bag. Again, another one is drawn without replacing the first ball. d the probability that both the balls drawn are white.  SECTION-D 2Qx15M= 30 Marks  lowing data shows age (X, in years) and blood pressure (Y).  56 42 72 39 63 47 52 49 40 42 68 60  127 112 140 118 129 116 130 125 115 120 135 133  (a) Calculate the two equation of regression line. (b) Calculate correlation coefficient between X and Y and interpret your result. (c) Can we estimate the blood pressure of a person aged 20 years on

Q.19	During a 20-day long skiing competition, the snow depth at Snow Mountain was measured (to the nearest cm) for each of the 20 days.  The records are as follows: 301, 312, 319, 354, 359, 345, 348, 341, 347, 344, 349, 350, 325,323, 324, 328,322, 332, 334, 337.		
	(a) Prepare grouped frequency distribution table with class 300-310, 311-320, 321-330,along with cumulative frequency more than and less than	5	CO4
	type.		
	(b) Prepare an ogive curve.	10	