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S.E (AIDS)

Unit III Statistics

Sr. No.	Questions on Moments	Year
1.	First four moments of a distribution about value 5 are 2, 20, 40 and 50.Obtain the first four central moments, mean, S.D and coefficient of skewness and kurtosis.	[NOV-15 COMP IT] May 2017 Mech
2.	First four moments of a distribution about value 44.5 are-0.4, 2.99, -0.08 and 27.63.Obtain the first four central moments, mean, S.D and coefficient of skewness and kurtosis.	[NOV-14 COMP-IT]
3.	The first four moments of a distribution about 2 are 1, 2.5, 5.5, 16.Calculate the first four moments about mean, A.M, S.D, coefficient of skewness and coefficient of kurtosis	[MAY-14 COMP IT]
4.	First four moments about the working mean 3.5 of a distribution are 0.0375, 0.4546, 0.0609 & 0.5074.Calculate the first four moments about the mean. Also calculate the coefficient of skewness.	[MAY-15 COMP IT]
5.	The first three moments about the value2 of a distribution are 1, 16 and - 40. Find mean, standard deviation and skewness of distribution.	[Nov 13, May 16 CIVIL]
6	The first four moments of a distribution about the value 5 are 3, 30, 50 and 60.Calculate first four moments about the mean. Also calculate coefficients of skewness and kurtosis.	[NOV 15 CIVIL]
7	The first four moments of a distribution about the value 4 are -1.5, 17, -30 and 108.Calculate first four moments about the mean. Also calculate coefficients of skewness and kurtosis.	[May 15 CIVIL] [May 16 MECH]
8	The first four moments of a distribution about the value 2 are 1, 2.5, 5.5 and 1.6. Calculate first four moments about the mean. Also calculate coefficients of skewness and kurtosis	[Dec 14, CIVIL]
9	The first four moments of a distribution about the value 5 are -4, 22, -117 and 560 resp. Calculate first four moments about the mean. Also calculate coefficients of skewness and kurtosis	May 18 Comp
10	The first four central moments about the working mean 30.2 of a distribution are 0.255, 6.222, 30.211 and 400.25. Calculate the first four moments about the mean. Also evaluate β_1 and β_2 and comment upon the skewness and kurtosis of the distribution.	Dec – 2017 Mech
11	Find the coefficient of correlation for the following data	Nov 14, May 15

	Y	18	12	24	06	30	36		

12	Find the first four moments about mean for the following data X: 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0 F: 4, 36, 60, 90, 70, 40, 10	[May 15 MECH]
13	Find the first four moments about mean for the following data x: 1, 2, 3, 4, 5, 6, 7, 8, 9 f: 1, 6, 13, 25, 30, 22, 9, 5, 2	[Nov 13 MECH]
14	Find the first four moments about mean for the following data x: 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0 f: 5, 38, 65, 92, 70, 40, 10	[Nov 14 MECH]
15	Calculate first three moments of the following distribution about the mean x: 0, 1, 2, 3, 4, 5, 6, 7, 8 f: 1, 8, 28, 56, 70, 56, 28, 8, 1	Civil Nov 2017

Questions on Regression

1.	Calculate the coefficient of correlation for the following data. X: 1, 2, 3, 4, 5, 6, 7, 8, 9 y: 9, 8, 10, 12, 11, 13, 14, 16, 15	[MAY-14 COMP IT]
2.	The Regression equation are given by $8x-10y+66=0, 40x-18y=214$ The value of variance of x is 9. Find i)The mean values of x &y ii) The correlation coefficient between x&y iii)S.D of y	[MAY-15 COMP IT]
3.	If the two lines of regression of 9x+y- λ =0 and 4x+y= μ and the mean of x and y are 2 and -3 respectively then find the values of λ and μ and the coefficient of correlation between x & y	[Dec 14, May 16 CIVIL]
4.	Calculate the correlation coefficient for the following data $n=20, \Sigma x=40, \Sigma y=40, \Sigma x^2=190, \Sigma y^2=200, \Sigma xy=150$ is	[NOV 15 CIVIL]
5.	Two lines of regression are given by 5y-8x+17=0 and 2y-5x+14=0 . If $\sigma^2_y=16$, find i)The mean value of x and y ii) σ^2_x iii) Coefficient of correlation between x and y.	[May 15 CIVIL]
6	Find the coefficient of correlation for the following data. x: 61, 64, 67, 70, 73 y: 5, 18, 42, 27, 8	[May 14 CIVIL]
7	Find the coefficient of correlation for the following data	[May 14 CIVIL]

x	5	7	9	11
y	8	4	16	12

8	Two lines of regression are given by $5x - 6y + 90 = 0$ and $15x - 8y - 130 = 0$ .Find a.) The mean value of x and y b.) Coefficient of correlation between x and y.	[Nov 13 CIVIL]
9	The two regression equations of the variables x and y are $x = 19.13 - 0.87y$, $y = 11.64 - 0.50x$, find $\bar{x}, \bar{y}$ and coefficient of correlation between x and y.	Dec 2017 Mech
10	Obtain regression lines for the following data	[May 16 MECH]

x	2	3	5	7	9	10
y	2	5	8	10	12	14

11	Obtain regression lines for the following data	[Nov 15 MECH]

x	2	3	5	7	9	10	12	15
y	2	5	8	10	12	14	15	16

12	Find the coefficient of correlation for the following data	[Nov 15 MECH]

x	6	2	10	4	8
y	9	11	5	8	7

13	Following are the values of import of raw material and export of finished product in suitable units	[May 14 MECH]

Export	10	11	14	14	20	22	16	12	15	13
Import	12	14	15	16	21	26	21	15	16	14

14	Find the coefficient of correlation for the following data	[Nov13, MECH]]

x	1	3	4	6	8	9	11	14
y	1	2	4	4	5	7	8	9

15	Find the coefficient of correlation for the following data:	May 2017 Mech

X	10	14	19	26	30	34
Y	12	16	18	26	29	35

16	Obtain the line of regression of y on x for the following data. Also estimate the value of y for x = 10	May 18 Comp

X	2	4	5	6	8	11
Y	18	12	10	8	7	5

17	Obtain correlation coefficient between population density and death rate from the data related to 5 cities	Civil May 2017

Population desity	200	500	400	700	300
Death rate	12	18	16	21	10