Course-BCA

Year/Sem - I/II

Subject-Mathematics

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Assignment

(Moments, Skewness, Kurtosis,)

Q1: Find the first four moments for the given individual series?

X	1	3	9	12	20

Q2:Calculate the variance and the third central moment from the data given below-

X	0	1	2	3	4	5	6	7	8
F	1	9	26	59	72	52	29	7	1

 Q3: Find out the kurtosis of the data given below-

class-interval	0-10	10-20	20-30	30-40
Frequency	1	3	4	2

Q4: Calculate the coefficient of the skewness from the following data-

Wages in rupees	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Labours	185	77	34	180	136	23	50

Topics- Correlation, Regression, Charpit's method

Q5: Calculate the coefficient of correlation of the data given below-

X	4	6	8	10	12
Y	2	3	4	6	10

Q6: Find the coefficient of correlation between x and y from the table of their values-

X	1	3	4	6	8	9	11	14
Y	1	2	4	4	5	7	8	9

Q7: Calculate the coefficient of correlation between the values of x and y from the following data-

X	78	89	97	69	59	79	61	61
Y	125	137	156	112	107	136	123	108

Q 8: Find the correlation coefficient between x and y when the lines of regression are-

2x-9y+6=0

x-2y+1=0

Q 9: Find the regression line of x and y for the given data-

X	1	4	2	3	5
Y	3	1	2	5	4

Q10(i): Find the equation of regression lines for the following values of x and y-

X	2	4	6	8	10
Y	6	5	4	3	2

Q10(ii): Find the complete integral of-

$P= (qy+z)^2$

Q11.: If two regression coefficients are 0.8 and 0.2 what would be the value of coefficient of correlation?

Q12:Two regression equation are-

7x-16y+9=0

5y-4x-3=0

Find $\bar{x}, \bar{y}$ and $\bar{Y}$.

Q13.:The following regression equation and variances are obtain from a correlation table-

20x-9y-107=0

4x-5y+33=0 [variance of x=9]

(i).The mean value of x and y

(ii) The standard deviation of y.

Topics-Partial Differential Equations

Q1: Find a complete integral of-

(p^2+q^2) y $=qz$

Q2: Find a complete integral of-

$P^2x+q^2y=z$

Q3: Solve xzp + yzq= xy

Q4.: p tan x + q tan y=tan z

Q5: $x^2p + y^2q = z^2$

Q6.: solve p+q=1

Q7.: solve yzp+zxq=xy

Q8: solve $y^2zp/x + zxq=y^2$

Q9.: solve$(x^2$-yz)p + $(y^2 - zx)q= z^2 - xy$

Q10.: solve $xy^2p-y^3q + axz = 0$

Q11.: solve 2r-5s+2t=0

Q12.: solve $(D^3 -3D^2D`+2DD`^2)z=0$

Q13.: solve $\dfrac{\partial^3 y}{\partial x^3} - 7\dfrac{\partial^3 z}{\partial x \partial y^2} + 6\dfrac{\partial^3 z}{\partial y^3} = 0$