

DOON UNIVERSITY, DEHRADUN
Final Semester Examination, 2017
School of Social Sciences
Msc. Economics Integrated (First semester)
Course Code: SSEI-114 Statistical Methods I

Time Allowed: 3 Hours

Maximum Marks: 50

Section A (Attempt all parts of this section)

(2*5=10 marks)

1. Skewness is present if Mean _____ Median _____ Mode.
2. If β_2 is less than 3 it is called _____. Thus if the value of γ_2 if equal to 2.56 then, _____.
3. One difference between Regression and Correlation.
4. If the scattered diagram tends to be dispersed all around what will you conclude about the relationship between the two variables?
5. If $b_{yx}=1.12$ and $r=0.8$ what is the value of b_{xy} ?

Section B Short Questions (Attempt any four questions)

(5*4=20 marks)

1. From the following table calculate the rank correlation coefficient

X	68	64	75	50	64	80	75	40	55	64
Y	62	58	68	45	81	60	68	48	50	70

2. The first four moments about the mean 18.5 of a distribution are 0.294, 7.144, 42.409 and 454,980. Calculate the moments about the mean.
3. A scooterist purchased petrol at the rate of Rs.24, Rs.29.50, and Rs.36.85 litre during three successive years. Calculate the average price of petrol if he purchased 150, 180 and 195 litres of petrol in respective years.
4. Given the following information calculate most likely yield of paddy when the annual rainfall is 22 cm.

	Yield per hectare in kgs	Annual rainfall in cm
Mean	973.5	18.3
S.D	38.4	2
Coefficient of Correlation	0.58	

5. The following table gives heights of boys and girls studying in a college. Find standard deviation of the combined students. Whose heights are more variable?

	Boys	Girls
No.	400	200
Average Height	68 inches	66inches
Variance	9	4

Section C Long answer type questions (Attempt any two)

(10*2=20 marks)

1. Calculate from the following data the value of correlation coefficient from Karl Pearson's method-

Marks	Years in Age				
	18	19	20	21	22
20-25	5	2	-	-	-
15-20	-	5	4	-	-
10-15	-	-	7	10	
5-10	-	-	-	3	2
0-5	-	-	-	3	1

2. A departmental store gives in service training to its salesman which is followed by a test. The management is considering whether it should terminate the services of the salesman who did not do well in the test. The following table gives the test scores and the sales by the salesman.

Test Scores	14	19	24	21	26	22	15	20	19
Sales (in '000)	31	36	48	37	50	45	33	41	39

3. Find skewness and kurtosis of the following series by the method of moments when calculated through assumed mean. Also comment on the nature of the distribution.

Marks	0-10	10-20	20-30	30-40	40-50
Frequency	6	10	15	10	5