N.B :

1. Attempt all questions.
2. Log tables will be supplied on request.
3. Use calculator is allowed.
4. In each questions attempt ANY THREE OUT OF FIVE questions.

Q.1 **a)** Calculate the mean deviation from median for the following data and coefficient M.D. (Median). [15]

Wts (in gms)	10 - 15	15 - 20	20 - 25	25 - 30	30-35	35-40	40-45
# of items	7	12	16	25	19	15	6

b) For the following data calculate standard deviation and C.V.

Wts in kg.	41	42	43	44	45	51	46	47	48
No. of students	3	6	8	15	17	50	12	5	4

c) Calculate Karl Pearson's Coefficient of corrilation to the given values.

$n = 20$, $\Sigma xi = 240$ $\Sigma yi = 400$, $\Sigma xi^2 = 4560$ $\Sigma yi^2 = 11020$,

$\Sigma xy = 6960$ Interprete value r.

d) Calculate the Spearsman's Rank comlation for the following data.

X	35	37	38	42	44	46	51	54	55	56
Y	40	32	39	40	41	31	50	32	46	55

e) Calculate the price index number from the following data using
i) Marshal Edgeworth's index number ii) Dorbish Bowley's index number

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	2	8	4	7
B	5	10	6	4
C	4	14	5	10
D	2	19	2	13

Q.2 **a)** Varify that Fisher's index number satisfies . [15]
i) The time reversal test
ii factor reversal test for the following data.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
	9	5	11	7.5
	5	11	6	16.5

b) If R = 0.6 and $\Sigma d^2 = 182$ find value of n.

c) Calculate value of comlation coefficient (r) for the following data.

Demand (X)	10	18	37	64	50	72	81	89	98	101
Supply (Y)	8	15	30	55	60	70	75	90	103	110

d) The arithmetic mean of the runs scored by 3 batsman Vijay, Kumar and Subhash in the same series of 10 innings are 50, 48, 12 respectively. The S.D. of their runs an 15, 12, 2 respectively who is the most consistent of the three ? If one of the three is to be selected who will be selected.

e) For moderately skewed distribution
A. M. = 160 Mode = 157. S.D. = 50
Find 1) Coefficient of variation.
      2) Medium
      3) Pearsonian Coefficient of Skewness

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