OLATUNJI ANUOLUWAPO TEMIJOPE STA 132.
COMPUTER ENGINEERING.
19/ENG02/050.

Assignment.

Group A.

C.I	f_A	x	$f_A x$	$x - \bar{x}$	$(x-\bar{x})^2$	$f(x-\bar{x})^2$
1-5	0	3	0	-14.83	219.93	0
6-10	7	8	56	-9.83	96.63	676.41
11-15	10	13	130	-4.83	23.33	233.30
16-20	2	18	36	0.17	0.03	0.06
21-25	1	23	23	5.17	26.73	26.73
26-30	5	28	140	10.17	103.43	517.15
31-35	4	33	132	15.17	230.13	920.52
	29		517			2374.17

(i) Mean $\bar{x} = \frac{\Sigma fx}{\Sigma f} = \frac{517}{29} = 17.83$

(ii) Standard deviation $= \sqrt{\frac{\Sigma f(x-\bar{x})^2}{\Sigma f - 1}} = \sqrt{\frac{2374.17}{28}}$

$= 9.21$

(iii) Coefficient of variation $= \frac{SD}{Mean} \times 100$

$= \frac{9.21}{17.83} \times 100 = 51.65\%$

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Group B.

CI	f_B	x	f_Bx	$x - \bar{x}$	$(x-\bar{x})^2$	$f(x-\bar{x})^2$
1-5	2	3	6	-17.14	293.78	587.56
6-10	4	8	32	-12.14	147.38	589.52
11-15	7	13	91	-7.14	50.98	356.86
16-20	20	18	360	-2.14	4.58	91.60
21-25	16	23	368	2.86	8.18	130.88
26-30	10	28	280	7.86	61.78	617.80
31-35	4	33	132	12.86	165.38	661.52
	63		1269			3035.74

(i) Mean $\bar{x} = \frac{\Sigma fx}{\Sigma f} = \frac{1269}{63} = 20.14$.

(ii) Standard Deviation $= \sqrt{\frac{\Sigma f(x-\bar{x})^2}{\Sigma f - 1}} = \sqrt{\frac{3035.74}{62}}$

$= 7.00$.

(iii) Coefficient of variation, $CV = \frac{SD}{Mean} \times 100$

$= \frac{7}{20.14} \times 100$

$= 34.76\%$

(iv) Group B has less variable distribution.

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