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COURSE: COMPUTER ENGINEERING

MAT NO: 19/ENG02/030

SUBJECT: STA 132

GROUP A

CL	F	\bar{x}	$F\bar{x}$	$(x - \bar{x})$	$(x - \bar{x})^2$	$F(x - \bar{x})^2$
1-5	0	3	0	-17.83	317.91	0
6-10	7	8	56	-9.83	96.63	676.41
11-15	10	13	130	-4.83	23.33	233.3
16-20	2	18	36	0.87	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
	$\Sigma F = 21$		$\Sigma F\bar{x} = 517$			2374.17

i) Mean = $\frac{\Sigma F\bar{x}}{\Sigma F} = \frac{517}{21} = 24.62$

ii) SD ~~S~~ = $\sqrt{\frac{\Sigma F(x - \bar{x})^2}{\Sigma F - 1}}$

iii) Coefficient of Variation, CV = $\frac{SD}{Mean}$

$$= \sqrt{\frac{2374.17}{29-1}}$$

$$\sqrt{\frac{2374.17}{28}}$$

$$= 9.21$$

(iii) Coefficient of Variation C.V = $\frac{\text{S.D}}{\text{mean}} \times 100$

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

$$= 51.65$$

~~GROUP B~~

~~1-5~~

~~6-10~~

~~11-15~~

~~16-20~~

CL	f	x	fx	$(x - \bar{x})$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
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	-4.14	17.14	274.24
26-30	70	28	280	-10.14	102.82	1028.20
31-35	4	33	132	-16.14	260.50	1042.00
	63		1269			3969.98

$$\text{mean} = \frac{1269}{63} = 20.14$$

$$SD = \sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f - 1}}$$

$$= \sqrt{\frac{3969.98}{62}}$$

$$= 8.00$$

$$\text{Coefficient of Variation, C.V} = \frac{S.D}{\text{mean}} \times 100$$