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Matric No: 19/ENG02 1068

Group A

C I	f	x	f.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	0.17	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
	$\Sigma f = 29$		$\Sigma fx = 517$			$\Sigma f(x-\bar{x})^2 = 2374.19$

$$i) \text{ Mean} = \frac{\Sigma fx}{\Sigma f} = \frac{517}{29} = 17.83$$

$$ii) \text{ Standard Deviation } s = \sqrt{\frac{\Sigma f(x-\bar{x})^2}{\Sigma f - 1}}$$
$$= \sqrt{\frac{2374.17}{28}}$$
$$= \underline{\underline{9.21}}$$

$$iii) \text{ Coefficient of Variation, } C.V = \frac{s.d}{\text{Mean}} \times 100$$
$$= \frac{9.21}{17.83} \times 100$$
$$= \underline{\underline{51.65}}$$

### Group B

C-I	f	x	fx	(x- $\bar{x}$ )	(x- $\bar{x}$ ) <sup>2</sup>	f(x- $\bar{x}$ ) <sup>2</sup>
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	20	28	560	-10.14	102.82	2056.40
31-35	4	33	132	-16.14	260.50	1042.00
	$\Sigma f = 63$		$\Sigma fx = 1269$			$\Sigma f(x-\bar{x})^2 = 3909.98$

$$\text{Mean} = \frac{\Sigma fx}{\Sigma f}$$

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

$$\text{S.D., } s = \sqrt{\frac{\Sigma f(x-\bar{x})^2}{\Sigma f - 1}}$$

$$= \sqrt{\frac{3909.98}{62}}$$

$$= 8.00$$

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

$$= \frac{8.00}{20.14} \times 100$$

$$= 39.72$$

c) Group B has less variable distribution.