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 19/EN002/002 STA 132
 COMPUTER ENGINEERING

GROUP	A	f	fa	(a - \bar{x})	(a - \bar{x}) ²	f(a - \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	222.3
16-20	2	17	34	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	926.52
	$\Sigma f = 29$		$\Sigma fa = 517$			$\Sigma f(a - \bar{x})^2 = 2374.17$

mean = $\frac{\Sigma fa}{\Sigma f} = \frac{517}{29} = 17.83$

i) S.D = $\sqrt{\frac{\Sigma f(a - \bar{x})^2}{\Sigma f - 1}} = \sqrt{\frac{2374.17}{28}} = 9.21$

ii Co-efficient variation

C.V = $\frac{S.D}{\text{mean}} \times 100$

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

= 51.65

B	F	n	f _n	$\frac{n-\bar{x}}$	$(n-\bar{x})^2$	$F(n-\bar{x})^2$
C1	2	3	6	-17.14	291.78	587.56
1-5	4	8	32	-12.14	147.38	589.52
6-10	7	12	84	-7.14	50.98	356.86
11-15	20	18	360	-2.14	4.58	91.60
16-20	16	23	368	17.14	293.78	587.56
21-25	10	28	280	10.14	102.82	1028.20
26-30	4	33	132	16.14	260.50	1042.00
31-35	4	37	148	22.14	490.18	1967.52
	$\Sigma F = 63$		$\Sigma f_n = 1269$			$\Sigma F(n-\bar{x})^2 = 2969.98$

$$M_{Bo n} = \frac{\Sigma f_n}{\Sigma F} = \frac{1269}{63} = 20.14$$

$$SD = \sqrt{\frac{\Sigma F(n-\bar{x})^2}{\Sigma F - 1}} = \sqrt{\frac{2969.98}{62}}$$

$$= 8.00$$

$$C.V = \frac{S.D}{M_{Bo n}} \times 100 = \frac{8.00}{20.14} \times 100 = 39.73$$

c) Group D has less variase distribution.