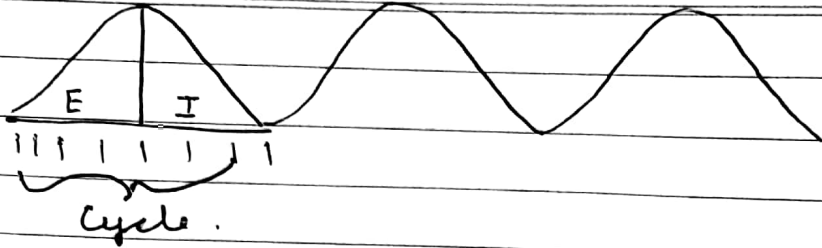


General problem: On arousal

Calculation of Pneumographic Data

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Date: / /



Calculation:-

I in Sec	E in Sec	C in Sec	I/E ratio	I/e Ratio	A in mm

$$\text{rate of respiration} = \frac{N}{\sum I + \sum E} \times 60 \text{ cycle/min}$$

EXPERIMENTAL CONDITION 2 (COMPLEX MATHEMATICS)

No. of Observation	Duration of Expiration (in sec)	Duration of Inspiration (in sec)	Duration of total cycle (in sec)	I/E (in sec)	I/C (in sec)	Amplitude of the curve (in mm)
1	3	2	5			3
2	3.5	3	6.5			4
3	5	0.5	5.05			4
4	2.5	2	4.5			4
5	3	2	5	0.53	0.35	3
6	3.5	0.5	4			3
7	3	2.5	5.5			4
8	2	2	4			5
9	2.5	1	3.5			5
10	3	1	4			6

$\Sigma E = 31$ $\Sigma I = 16.5$ $\Sigma C = 47.5$

$\Sigma A = 41$

Mean of I = $\frac{16.5}{10}$ sec
= 1.65 sec

Mean of E = $\frac{31}{10}$ sec
= 3.1 sec

Mean of C = $\frac{47.5}{10}$ sec
= 4.75 sec

Mean of Amplitude = $\frac{41}{10} = 4.1$ sec

Rate of Respiration = $\frac{10}{16.5 + 31} \times 60$ cycles/min
= 12.6 cycles/min