

PERCENTAGE

57

$$x\% = \frac{x}{100}$$

$$10\% \text{ of } x = \frac{10x}{100} = \frac{x}{10}$$

$$10\% \uparrow = x + \frac{x}{10} = \frac{11x}{10}$$

$$10\% \uparrow = \frac{110\%}{100}$$

$$10\% \downarrow = \frac{90}{100}$$

$$20\% \text{ of } x = \frac{20x}{100} = \frac{x}{5}$$

$$\text{Remaining} = x - \frac{x}{5}$$

$$= \frac{4x}{5}$$

$$= 80\%$$

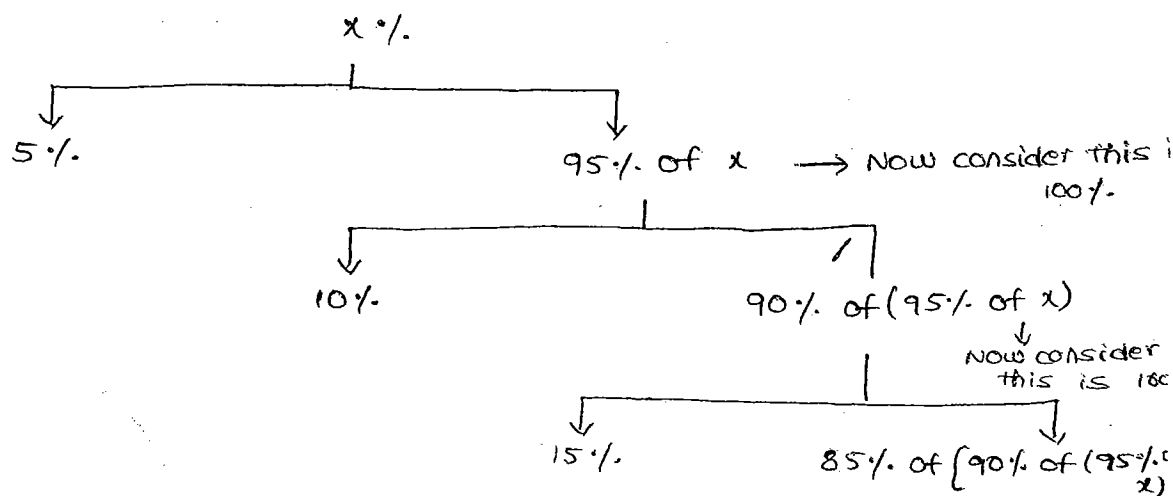
$$R = \frac{80}{100} \times x = \frac{4x}{5}$$

①, 5%, 10%, 15%, 20%, Remaining = ?

$$A \times \frac{95}{100} \times \frac{90}{100} \times \frac{85}{100} \times \frac{80}{100} = \text{Remaining (R)}$$

$$R \times \frac{100}{95} \times \frac{100}{90} \times \frac{100}{85} \times \frac{100}{80} = \text{Actual (A)}$$

$$A > R$$



P.9 No:- 80

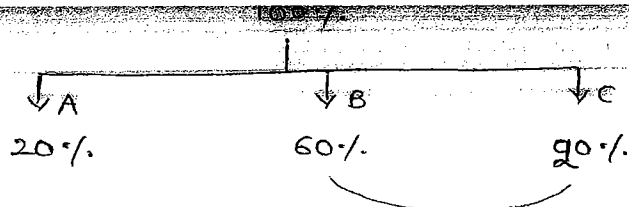
1. A → 6%

B → 7%

$$1\% = 80 \text{ mem}$$

$$100\% = 100 \times 80$$

$$= 8000 \text{ members.}$$



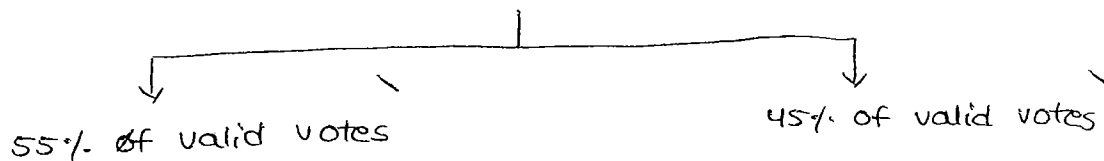
$$40\% = 720$$

$$1\% = 18$$

$$100\% = 100 \times 18 \\ = 1800$$

3.

$$100\% \text{ votes} = 7500$$



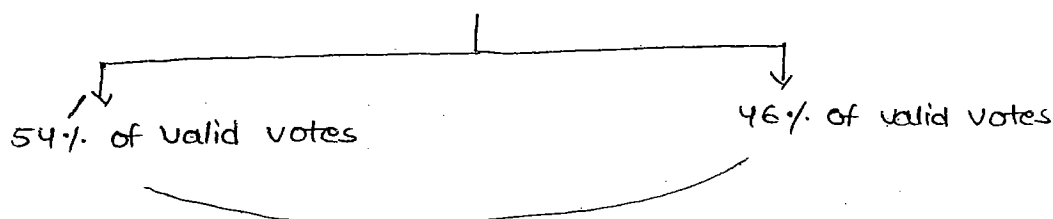
$$\frac{45}{100} \times 7500 \times \frac{80}{100}$$

20% are
invalid
votes

$$= 2700$$

4.

$$100\% \text{ votes}$$



$$8\% \text{ of valid} = 1620$$

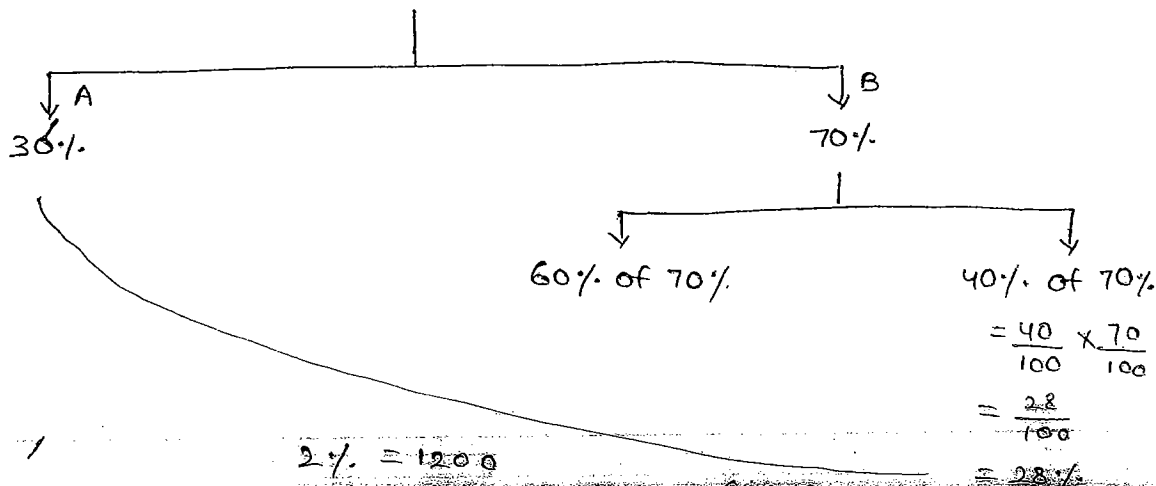
$$\frac{8}{100} \times x + \frac{620}{100} \times \frac{90}{100} \times \frac{90}{100} = 1620$$

$$x = \frac{1620 \times 100 \times 100 \times 100}{90 \times 90 \times 8}$$

$$= 25000$$

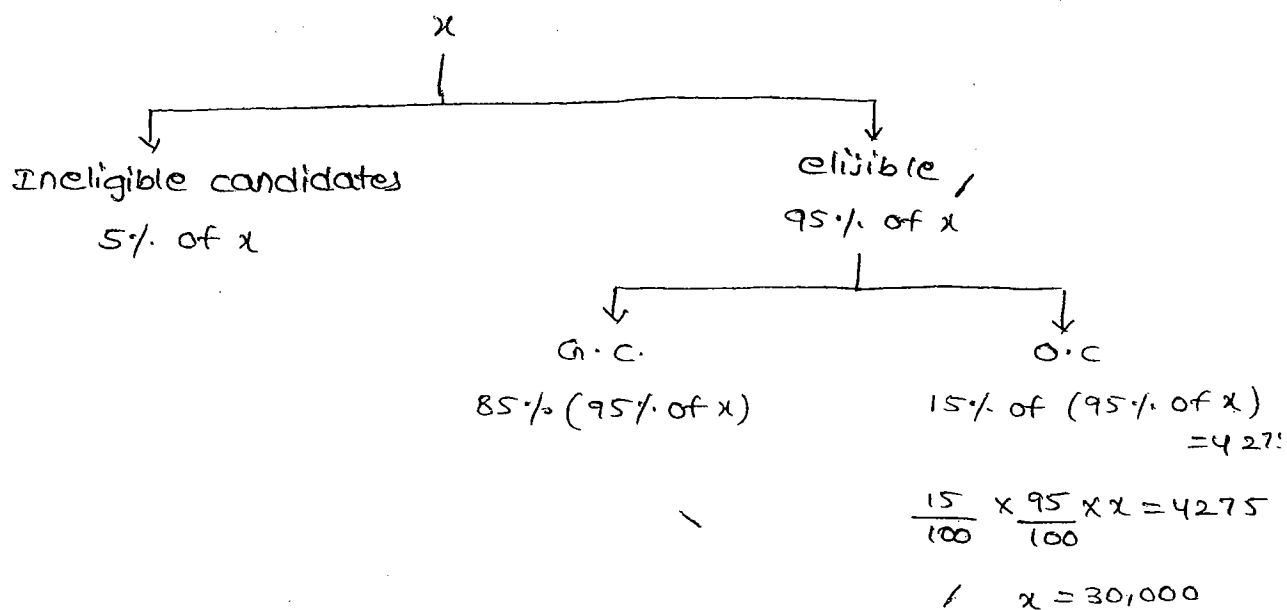
5.

$$100\% \text{ votes}$$



$$2\% = 1200$$

1.



2. He spent 30%, 40%, 50% of 18,400

$$\text{actual amount} \rightarrow 18400 \times \frac{70}{100} \times \frac{60}{100} \times \frac{50}{100} \rightarrow \text{Remaining amount}$$

$$= 3864 \leftarrow \text{saving amount.}$$

3. He spent 10%, 15%, 10%.

$$\text{Remaining} = 1,377$$

$$1,377 \times \frac{100}{90} \times \frac{100}{85} \times \frac{100}{90}$$

$$\text{Actual} = 2000$$

5.

<u>2000</u>	<u>2001</u>
Investment = x	Investment = $(x - 5000)$
profit = 20% ↑	profit = 26% ↑
Income =	Income

$$\frac{120}{100} \times x = \frac{126}{100} \times (x - 5000)$$

$$x = 1,05,000$$

7. $10,000 \times \frac{110}{100} \times \frac{80}{100} \times \frac{130}{100}$

$$= 11,440.$$

9.

1000 RS

20% 10%

$$1000 \times \frac{80}{100} \times \frac{90}{100} \\ = 720$$

$$\text{Discount} = 1000 - 720$$

$$= 280$$

1000 RS

15% 15%

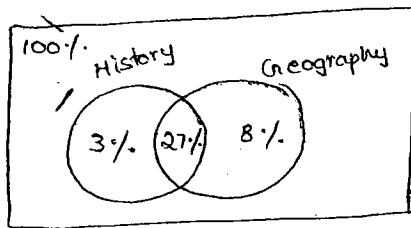
$$1000 \times \frac{85}{100} \times \frac{85}{100} \\ = 722.5$$

$$\text{Discount} = 1000 - 722.5$$

$$= 277.50$$

$$2.50$$

10.



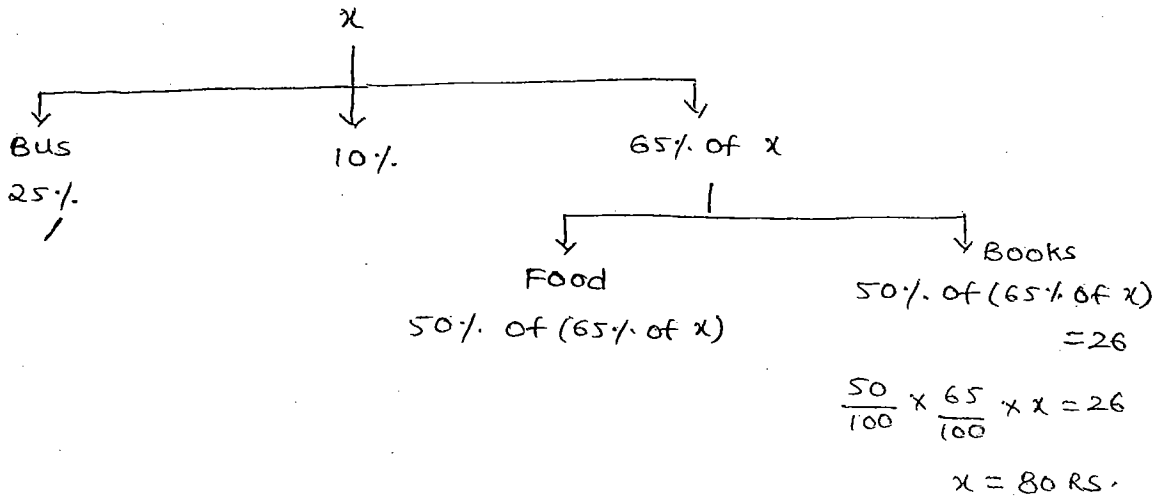
$$\text{passed} = 100\% - (3\% + 27\% + 8\%)$$

$$= 62\% \rightarrow 248$$

$$1\% \rightarrow 4$$

$$100\% \rightarrow 400$$

11.



12.

$$\begin{array}{ccc} 1 & : & 2 \\ 50\% & & 60\% \end{array} \quad \begin{array}{ccc} 2 & : & 2 \\ & & 65\% \end{array}$$

$$\frac{1 \times 50 + 2 \times 60 + 2 \times 65}{5} = 60\%$$

15. $(x - \frac{15}{100}x) = 25 \text{ kg}$

$$\frac{17x}{20} = 25$$

$$x = 29.414$$

$$= 30 \text{ kg}$$

$$\text{No. of cans} = \frac{30}{2} = 15$$

$$\text{Cost} = 16 \times 15 = 240$$

19. $t + s = 95 \rightarrow \textcircled{1}$

$$0.9t + 1.2s = 90 \rightarrow \textcircled{2}$$

$$1.2t + 1.2s = 114 \rightarrow \textcircled{1} \times 1.2$$

$$-0.3t = -24$$

$$t = 80 \text{ RS/-}$$

20)	S	D	Total
	20	(24-4) 40	60
	20% of 20	20 nds	40% of 60
	= 4 < 25 yr old	= 50% < 25 yr old	= 24 < 25 yr old