

Aptitude Assignment - 4

Sol 1 Let capacity of tank is  $C$  litres.

$$\text{Rate at leakage} = \frac{C}{6} \text{ l/hr}$$

$$\text{Rate at filling} = 4 \text{ l/min} = \frac{1}{15} \text{ l/sec}$$

$$\text{Rate at which tank being empty} = \left( \frac{C}{6} - \frac{1}{15} \right) \text{ l/hr}$$

$$\text{So, } \frac{C}{\frac{C}{6} - \frac{1}{15}} = 8, \quad C = 720 \text{ litres} \quad \text{Ans} \leftarrow$$

Sol 2 no. of males =  $\frac{60}{100} \times 1000 = 600$

$$\text{no. of females} = \frac{40}{100} \times 1000 = 400$$

$$\text{no. of literate people} = \frac{20}{100} \times 1000 = 200$$

$$\text{no. of literate males + females} = \frac{25}{100} \times 1000 = 250 \quad \text{(i)}$$

$$\text{no. of literate men} = \frac{20}{100} \times 600 = 120$$

$$120 + \text{literate females} = 250$$

$$\text{no. of literate females} = 130$$

$$\% \text{ of females literate} = \frac{130}{400} \times 100 = 32.5\%$$

Ans



Sol 3 Let assume total candidate appeared = 100

Pass in english = 80% of 100 = 80

Pass in Maths = 85% of 100 = 85

73% passed in both eng & maths

Let  $x\%$  candidate failed in both subjects.

Total = Pass in Eng + Pass in Maths +  
pass in both + failed in both

$$100 = (80 - 73) + (85 - 73) + 73 + x$$

$$x = 35 \quad \text{Ans}$$

Sol 4

Income per month = 13,500

expenditure = 9000

Savings = 4500

new year, income  $\uparrow$  by 14%.

$$\begin{aligned} \text{new income} &= 13500 + 14\% \text{ of } 13500 \\ &= 15,390 \end{aligned}$$

expenditure  $\uparrow$  by 7%.

$$\text{new exp.} = 9000 + 7\% \text{ of } 9000 = 9,630$$

$$\text{new monthly savings} = 15,390 - 9,630 = 5,760$$

$$\therefore \% \uparrow \text{ in Savings} = \frac{5760 - 4500}{4500} \times 100$$

$$= 28\% \quad \text{Ans}$$



Sol 5 49 pumps empty tank in 10 days, working 10hr/day

Total work = no. of pumps  $\times$  time  $\times$  efficiency

Efficiency 1 pump for 1 day

$$= 49 \times 10 \times \frac{1}{490} = 1$$

Hence, 1 day is required. Ans  $\leftarrow$