Assignment No. 4

Que 1

Solution:

workdone by the inlet in 1 hour

$= \frac{1}{6} \times \frac{1}{4} = \frac{1}{24}$

work done by inlet in 1 min $= \frac{1}{24} \times \frac{1}{60}$

$= \frac{1}{1440}$

volume of $\frac{1}{1440}$ part = 4 litres

volume of whole = (1440×4)

= 5760 times

Que 2

Soln

Total no. of literate people $= 25 \times \frac{1000}{100}$

$= 250$

No. of males $= 20 \times \frac{600}{100}$

$= 120$

so No. of literate Female $= 250 - 120$

$= 130$

% of literate Female $= 130 \times \frac{100}{400}$

$= 32.5\%$

Que 3

Soln

A = Students passed in English = 80%.

B = Students passed in maths = 85%.

A∪B = students passed in both sub = 73%.

Then no. of students passed in one subject is

$(80+85)-73 = 92\%$.

Thus, No of failed students

$= 100-92$

$= 8\%$.

Que 4

soln:

Income at present = 13,500

Expenditure at present = 9,000

saving at present = 13,500 − 9000

= 4,500

Income next year = 13,500 + 14% of 13,500

$= \frac{114}{100} \times 13,500$

= 15,390

Expenditure next year = 9,000 + 7% of 9

$= \frac{107}{100} \times 9,000$

$= 9,630$

savings next year = 15390 - 9630

$= 5,760$

increase in saving = 5,760 - 4500

$= 1260$

% of increase in saving $= \frac{1260}{4500} \times 10$

$= 28\%$

Que 5

Soln:

49 pumps — 10 days — 10 hrs/day

70 pumps — ? — 7 hr/day

∴ 1 pump can empty a reservoir by work

1 hours/day = 10 x 49 x 10 days

70 pumps can empty a Reservoir 7 hr/day

$= 10 \times \left(\frac{49}{70}\right) \times \left(\frac{10}{7}\right)$ days

= 10 days