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ASB (2CSE201)

(1) A and B completes same work in 20 days & 25 days respectively.

LCM of A & B work days = 100

5	20, 25
5	4, 5
2	2, 1
2	1, 1

Per day work of A = $\frac{100}{20} = 5$

Per day work of B = $\frac{100}{25} = 4$

total = 5+4 = 9

Both worked together of 5 days

$\therefore 5 \times 9 = 45$

$\therefore 100 - 45 = 55$ left work.

Per day work of B = $\frac{55}{4}$

Total work completed in days = $5 + \frac{5}{4}$

$= \frac{20+5}{4} = \frac{75}{4} = 18\frac{3}{4}$

$\therefore$ Total work is completed in $\Rightarrow 18\frac{3}{4}$ days.

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(2) Let length of both be l

$\therefore$ distance covered $= 2 \times l$

speed $= 46 - 36 = 10$ km/hr

$= \frac{10 \times 5}{18}$ m/sec

$= \frac{25}{9}$ m/s

$\frac{d_1}{t_1} = \frac{d_2}{t_2}$

$\frac{2l}{36} = \frac{25}{9}$

$l = \frac{25 \times 36}{2 \times 9}$

$\boxed{l = 50 \text{ m}}$

(3) Let $P = 100$

$SI = 100$ & $T = 6$ years

rate $= \frac{100 \times 10}{100 \times 6} = 10\%$

Now, $P = 15000$ $T = 3$ years $r = 10\%$

$CI = 15000 \times \left[\left(1 + \frac{10}{100}\right)^3 - 1\right]$

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$= 15000 \times \left(\left(\frac{110}{100}\right)^3 - 1\right)$

$= 15000 \times (1.331 - 1)$

$= 15000 \times 0.331$

CI = 4965 Rs.

(4)

E	B	A	C	D

Bench

conditions satisfied :-

(i) E not sitting with D

(ii) E is on left end of the bench

(iii) A is sitting next to B

(iv) C is sitting next to D.

Ans A is sitting at second position w.r.t D, i.e A is sitting between B & C.

(5) given :- 26 kg rice at ₹20/kg.

30 kg rice at ₹36/kg.

total rice = 26 + 30 = 56 kg

Selling price = 56 × 30 = 1680 ₹

cost price = (26 × 20) + (30 × 36) = 1600 ₹

profit = 1680 − 1600 = 80 Rs.

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Profit % = $\frac{\text{profit}}{\text{C.P}} \times 100$

$= \frac{80}{1600} \times 100$

$= 5$

Profit = 5%

(6)

	Floor	Going to countries	Given countries
S	7	→ Tokyo	Egypt
Q	6	→ Sydney	America
V	5	→ Canada	Sydney
P	4	→ America	Tokyo
U	3	→ France	Canada
T	2	→ Australia	Australia
R	1	→ Egypt	France

Tokyo X

Sydney X

(6) U lives on third floor, he/she is travelling to France

(7) S lives on the floor which is immediate above Q., Tokyo is the country where he is travelling

(8) Q & V, i.e 2 people live between S & the one who is travelling to America

(9) false. Because, V is travelling to Canada and he lives below Q as given and

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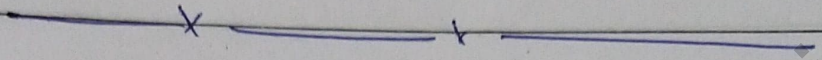
T line immediate above R as given.

(10) Q is travelling to Sydney and T is travelling to Australia.



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