

Quiz Date: 25th May 2020

Q1. In a will, signed by a man for his 2 sons, Rs 18750 is divided and deposited in bank at 5% pa S.I in such a way that his two sons of 12 and 14 years of age receives same money when they attain maturity at 18 years age. Find the sum allotted at present to each son.

- (a) Rs 9000, Rs 9750
- (b) Rs 8000, Rs 10750
- (c) Rs 9500, Rs 9250
- (d) Rs. 10000, Rs. 8750
- (e) None of these

Q2. A tank is to be filled with water through five pipes. The first pipe can fill it in 40 minutes; the second, the third and the fourth together can fill it in 10 minutes; the second, the third and the fifth fill it in 20 minutes; the fourth and the fifth together in 30 minutes. In what time will the tank be filled if all the five pipes work simultaneously?

- (a) $3\frac{2}{5}$ minutes
- (b) $7\frac{3}{4}$ minutes
- (c) $8\frac{4}{7}$ minutes
- (d) $8\frac{1}{7}$ minutes
- (e) None of these

Q3. Rohit bought 20 soaps and 12 toothpastes. He marked-up the soaps by 15% on the cost price of each, and the toothpastes by Rs. 20 on the cost price each. He sold 75% of the soaps and 8 toothpastes on marked price and made a profit of Rs. 385. If the cost of a toothpaste is 60% the cost of a soap and he got no return on unsold items, what was his overall profit or loss?

- (a) Loss of Rs. 355
- (b) Loss of Rs. 210
- (c) Loss of Rs. 250
- (d) Profit of Rs. 350
- (e) profit of Rs. 325

Q4. Sandeep after travelling 50 km meets a swami who suggests him to go slower. He then proceeds at $\frac{3}{4}$ of his former speed and arrives at his destination 35 minutes late. Had the meeting occurred 24 km further Sandeep would have reached its destination 25 minutes late. Find the initial speed of Sandeep.

- (a) 48 km/hr
- (b) 36 km/hr
- (c) 54 km/hr
- (d) 58 km/hr
- (e) 60 km/hr

Q5. A tank of 3600 cu m capacity is being filled with water. The delivery of the pump discharging the tank is 20% more than the delivery of the pump filling the same tank. As a result, twelve minutes more time is needed to fill the tank than to discharge it. Determine the rate of delivery of the pump filling the tank.

- (a) $40 \text{ m}^3/\text{min}$
- (b) $50 \text{ m}^3/\text{min}$
- (c) $60 \text{ m}^3/\text{min}$
- (d) $80 \text{ m}^3/\text{min}$
- (e) $58 \text{ m}^3/\text{min}$



Q6. A group of 30 men, working 4 hours a day can do a piece of work in 10 days. Find the number of days in which another group of 45 men working 8 hrs a day can do twice the work. Assume that 2 men of the first group do as much work in 2 hours as 4 men of the second group do in 1 hr.

- (a) $6\frac{1}{3}$ days
- (b) $6\frac{2}{3}$ days
- (c) $5\frac{3}{6}$ days
- (d) $3\frac{1}{6}$ days
- (e) None of these

Q7. The manufacturer of an article makes a profit of 5%, the wholesale dealer makes a profit of 10%, and the retailer makes a profit of 15%. Find the manufacturing price of the article if the retailer sold it for Rs. 5313.

- (a) Rs. 4000
- (b) Rs. 4500
- (c) Rs. 5000
- (d) Rs. 4950
- (e) None of these

Q8. 3 years ago, Ambuj was thrice as old as Avinash. If the ratio of their present ages is 8 : 3 respectively, what is the difference between their present ages in years ?

- (a) 32 years

- (b) 30 years
- (c) 28 years
- (d) 35 years
- (e) None of these

Q9. A trader marked his goods at 20% above the cost price. He sold half the stock at the marked price, one quarter at a discount of 20% on the marked price and the rest at a discount of 40% on the marked price. His total gain is

- (a) 2%
- (b) 4.5%
- (c) 13.5%
- (d) 15%
- (e) 12%

Q10. Annual income of Sameer is 8.4 lakh rupees. He spends $14\frac{2}{7}\%$ on Rent, $16\frac{2}{3}\%$ of remaining on Food, $11/20$ of remaining spends on Cloth and travel together and rest amount on savings monthly, then find the difference between total saving and amount spend on travel annually, if given ratio between amount spend on Cloth to travel is 17 : 8?

- (a) 164400 Rs.
- (b) 165400 Rs.
- (c) 160400 Rs.
- (d) 175400 Rs.
- (e) 150400 Rs.

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Directions (11-15): What should come in place of question mark (?) in the following number series?

Q11. 561, 642, 763, 932, 1157, ?

- (a) 1446
- (b) 1326
- (c) 1482
- (d) 1246
- (e) 1426

Q12. 1524, 1443, 1394, ?, 1360, 1359

- (a) 1303
- (b) 1218
- (c) 1359
- (d) 1369
- (e) 1569

Q13. 8, 24, 49, 85, 134, ?

- (a) 189
- (b) 176
- (c) 198
- (d) 201

(e) 321

Q14. 3, 10, 15, 26, 35, ?

- (a) 63
- (b) 50
- (c) 60
- (d) 54
- (e) 80

Q15. 1543, 1440, 1337, ?, 1131

- (a) 1233
- (b) 1234
- (c) 1235
- (d) 1238
- (e) 1433



Solutions

S1. Ans.(a)

Sol.

Let the sum allotted be x & y.

$$\text{Now, } x + \frac{x \times 6 \times 5}{100} = y + \frac{y \times 4 \times 5}{100}$$

$$\Rightarrow \frac{x}{y} = \frac{12}{13}$$

So, sum allotted =

$$X \rightarrow \frac{12}{25} \times 18750 = 9000$$

$$Y \rightarrow \frac{13}{25} \times 18750 = 9750$$

S2. Ans.(c)

Sol.

Pipes	Time	Efficiencies(unit/min), if total capacity of tank = 120unit
P ₁	40 min	3
P ₂ +P ₃ +P ₄	10 min	12
P ₂ +P ₃ +P ₅	20 min	6
P ₄ +P ₅	30 min	4

$$\text{Efficiency of } (P_2 + P_3 + P_4 + P_5) = \frac{1}{2} (12 + 6 + 4) = 11$$

(by adding 2nd, 3rd and 4th row)

$$\text{Efficiency of } (P_1 + P_2 + P_3 + P_4 + P_5) = 3 + 11 = 14$$

$$\text{Time required to fill the tank} = \frac{120}{14} = 8\frac{4}{7} \text{ min}$$

S3. Ans.(a)

Sol.

Let C.P. of one soap = Rs. x

C.P. of one toothpaste = Rs. y

$$\Rightarrow \text{S.P. of one soap} = \text{Rs. } \frac{115x}{100}$$

S.P. of one toothpaste = Rs. $(y + 20)$

and C.P. of one toothpaste = 60% C.P. of one soap

$$y = 0.6x$$

Profit on 75% of soap (i.e. 15 soap)

and 8 toothpastes = Rs. 385

$$\Rightarrow \frac{115x}{100} \times 15 + 8 \times (y + 20) - (15x + 8y) = 385$$

$$\Rightarrow x = \text{Rs. } 100$$

$$y = \text{Rs. } 60 = 0.6x$$

C.P. of 20 soaps and 12 toothpastes

$$= 20 \times 100 + 12 \times 60 = \text{Rs. } 2720$$

S.P. of 15 soaps and 8 toothpastes

$$= (15 \times 100 + 8 \times 60) + 385 = \text{Rs. } 2365$$

And he gets no return on unsold items.

Total S.P. = Rs. 2365

Loss = C.P. - S.P.

$$= \text{Rs. } (2720 - 2365) = \text{Rs. } 355$$

S4. Ans.(a)

Sol.

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Let original speed of Sandeep is = $4x$ km/h

Let reduced speed of Sandeep is = $3x$ km/h

according to question

$$\frac{24}{3x} - \frac{24}{4x} = \frac{(35 - 25)}{60}$$

$$x = 12$$

original speed = $12 \times 4 = 48$ km/h

S5. Ans.(b)

Sol.

$$20\% = \frac{1}{5}$$

∴ Efficiency of filling pump is 5 & efficiency of discharging pump is 6.

Difference of time is 12 min.

∴ Time in which pump can fill = $6 \times 12 = 72$ min.

∴ Rate of delivery of pump filling the tank

$$= \frac{3600}{72} = 50 \text{ m}^3/\text{min.}$$

S6. Ans.(b)

Sol. Let in the first group a man can do x unit in one hour and in second group a man can do y unit in one hour

$$2 \times x \times 2 = 4 \times y \times 1$$

$$x = y$$

Let required time be t days.

ATQ

$$2 \times 30 \times 4 \times 10 = 45 \times 8 \times t$$

$$t = 6\frac{2}{3} \text{ days}$$

S7. Ans.(a)

Sol.

Let the manufacturing price is MP

$$MP \times \frac{105}{100} \times \frac{110}{100} \times \frac{115}{100} = 5313$$

$$MP = 4000$$

S8. Ans.(b)

Sol.

$$(A_M - 3) = (A_V - 3) \times 3$$

$$A_M - 3 = 3A_V - 9 \quad \dots (i)$$

$$\frac{A_M}{A_V} = \frac{8}{3}$$

$$\text{Or, } 8x - 3 = 3 \times 3x - 9$$

$$\text{Hence, } x = 6$$

$$\therefore \text{Difference} = 8x - 3x = 5x = 30$$

S9. Ans.(a)

Sol.

Let the C.P. of an item be x and no. of items be A .

$$\text{Total C.P.} = Ax$$

$$\text{Total S.P.} = 1.2x \times \frac{A}{2} + \frac{4}{5} \times \frac{6}{5}x \times \frac{A}{4} + \frac{6}{10} \times \frac{6}{5} \times x \times \frac{A}{4}$$

$$= \frac{3Ax}{5} + \frac{6Ax}{25} + \frac{9Ax}{50}$$

$$= \frac{51Ax}{50}$$

$$= 1.02Ax$$

$$\therefore 2\% \text{ profit}$$

S10. Ans.(a)

Sol.

Monthly income of Sameer

$$= \frac{8.4}{12} \text{ lakh}$$

$$= 70000 \text{ Rs.}$$

$$\text{Spend on Rent} = 70000 \times \frac{1}{7}$$

$$= 10000$$

$$\text{Spend on Food} = (70000 - 10000) \times \frac{1}{6}$$

$$= 10000$$

Spend on (Cloth + travel)

$$= (70000 - 20000) \times \frac{11}{20}$$

$$= 27500 \text{ Rs.}$$

$$\text{Saving} = 22500 \text{ Rs.}$$

$$\text{Expend on travel} = 27500 \times \frac{8}{25}$$

$$= 8800$$

$$\text{Required difference} = (22500 \times 12 - 8800 \times 12) \text{ Rs.}$$

$$= (270000 - 105600) \text{ Rs.}$$

$$= 164400 \text{ Rs.}$$

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S11. Ans.(a)

Sol.

$$+9^2, +11^2, +13^2, +15^2 \dots\dots$$

$$\therefore ? = 1157 + 289 = 1446$$



S12. Ans.(d)

Sol.

$$-9^2, -7^2, -5^2 \dots\dots$$

$$\therefore ? = 1394 - 25 = 1369$$

S13. Ans.(c)

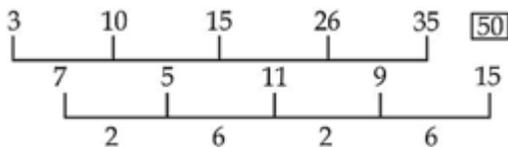
Sol.

$$+4^2, +5^2, +6^2, +7^2 \dots\dots$$

$$\therefore ? = 134 + 64 = 198$$

S14. Ans.(b)

Sol.



S15. Ans.(b)

Sol.

$$-103, -103, -103 \dots\dots$$

$$\therefore ? = 1337 - 103 = 1234$$

