Quiz Date: 1st April 2020

Directions (1-5): Given below is a bar graph that shows the percentage distribution of production of cotton in 7 different states of India in year 2012 Total Production = 51400 tons.



Given below is the table which shows the ratio of production of cotton to coffee in these 7 states in 2012

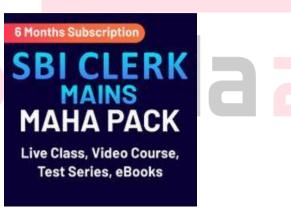
Note: Ratio for state Punjab is not given.

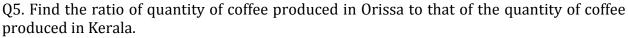
State	Cotton: Coffee		
UP	3:2		
Bihar	3 : 5		
Kerala	4 : 5		
Punjab	- : -		
Orissa	7 : 6		
A.P.	9 : 8		
M.P.	1 : 2		

- Q1. What is the difference (in tonnes) between average production of cotton from state Kerala and U.P. together and that from state Bihar and Orissa together?
- (a) 1850
- (b) 1799
- (c) 1829
- (d) 1739
- (e) 1599
- Q2. Coffee produced in U.P is approximately what percent more or less than Cotton produced in Punjab?

- (a) 65.2%
- (b) 60.6%
- (c) 56.5%
- (d) 58.2%
- (e) 64.7%
- Q3. Find the ratio of coffee produced in Punjab (in tonnes) to that of cotton produced (in tonnes) in MP if it is known that coffee produced in Punjab is same as that in Kerala.
- (a) $\frac{18}{5}$
- (b) $\frac{5}{2}$
- (c) $\frac{16}{7}$
- (d) $\frac{21}{8}$
- (e) None of these
- Q4. Coffee produced by A.P. & M.P. together forms what percent of total cotton produced by all the states together?
- (a) 27%
- (b) 25%
- (c) 32%
- (d) 28%
- (e) 24%

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(a) 48:175 (b) 98:83 (c) 2:5 (d) 4:11 (e) 11:17

Directions (6-10): The line graph given below shows the profit percentage on shoes sold by two companies Puma and Adidas in five years and table shows the production (in quintals) of shoes and jackets by both companies in five years. Study the graph and table carefully to answer the questions based.



company→	Puma		Adidas	
year↓	products		products	
	Shoes (in	Jackets (in	Shoes (in	Jackets (in
	quintals)	quintals)	quintals)	quintals)
2010	40	60	50	100
2011	100	60	90	50
2012	70	30	110	30
2013	60	30	30	20
2014	50	100	50	70

Q6. In 2010 ratio between cost price per quintal of shoes and cost price per quintal of jacket for both company is 4:7. What is the approximate profit percent on jacket in 2010 for both company, if ratio of profit of both product in 2010 is 2:3 (shoes: jacket) by both company. (profit percent on jacket for both companies is same)

- (a) 8%
- (b) 16%
- (c) 10%
- (d) 14%
- (e) 12%

Q7. In 2011 and 2013 cost price of both products per quintal are same for Puma and profit percentage are also same for both product for Puma then profit on shoes is what percent of the profit on jacket in these two years for Puma. (approx.)

- (a) 180%
- (b) 145%
- (c) 172%
- (d) 155%
- (e) 160%

- Q8. What is the ratio of total selling price of jacket for Adidas in year 2013 to 2014 if cost price of the products per quintal are in ratio 3: 4 (shoes: jacket) for both years 2013 and 2014 and profit for both product remain same in both year (2013, 2014) for Adidas.
- (a) 89:310
- (b) 34:41
- (c) 91:300
- (d) 95:341
- (e) None of these
- Q9. What is the total profit earned by Adidas in the year 2010,2011 and 2012 on jacket if cost price is 250 per quintal all over the year and profit percent on jacket is same as profit on shoes of Adidas.
- (a) 12370
- (b) 10000
- (c) 13000
- (d) 15250
- (e) None of these
- Q10. Find the difference b/w the total production of shoes and production of jackets by both companies in all over the years.
- (a) 150 quintals
- (b) 100 quintals
- (c) 129 quintals
- (d) 130 quintals
- (e) None of these
- Q11. A sales man sold a grinder at 10% discount at mark price. He found that he earns a profit of $\frac{50}{3}$ % but instead of calculating profit on cost price he calculates it on the sum of cost price and selling price. If cost price of grinder is 1350 then find out the mark price.
- (a) 2100
- (b) 2300
- (c) 1890
- (d) 1500
- (e) 2400
- Q12. Find the selling price of goods if two salesmen claim to make 25% profits each, one calculating it on cost price while another on the selling price, the difference in the profits earned being Rs 100 and selling price being the same in both the cases.
- (a) Rs 2000
- (b) Rs 1600
- (c) Rs 2400
- (d) Rs 2500
- (e) Rs 2050

Q13. 'A' sells a scooter priced Rs. 36000. He gives a discount of 8% on the first Rs. 20000 and 5% on the next Rs. 10000. How much discount can he afford on the remaining Rs. 6000 if he is to get as much as when 7% discount is allowed on the total?

- (a) 5%
- (b) 6%
- (c) 7%
- (d) 8%
- (e)7.5%

Q14. Transportation cost of a bike is 25% of itself. At the time of selling shopkeeper marks the price of bike 20% above and allows a discount of $12\frac{1}{2}$ %. If transportation cost of bike increased by 20% and selling price of bike remains the same, then profit of shopkeeper reduced by Rs. 2400. Find the total cost price of the bike?

- (a) 72,000 Rs.
- (b) 84,000 Rs.
- (c) 70,000 Rs.
- (d) 60,000 Rs.
- (e) 90,000 Rs.



Q15. Divyaraj purchased jeans and shirt from a seller, marked price of jeans and shirt in the ratio of 9: 7 and seller offered $14\frac{2}{7}\%$ discount on shirt and $11\frac{1}{9}\%$ on jeans and number of jeans and shirt purchased by Divyaraj in the ratio of 5:8. If Divyaraj marked up jeans and shirt 50% above their cost price and offered 25% discount on jeans and $11\frac{1}{9}$ % on shirt, Find overall profit of Divyaraj in this transaction?

- (a) $20\frac{19}{22}\%$ (b) $18\frac{19}{22}\%$ (c) $16\frac{19}{22}\%$ (d) $23\frac{19}{22}\%$ (e) $24\frac{19}{22}\%$

Solutions

S1. Ans.(b)

Sol. Required difference

$$= \frac{1}{2} \left[\left(\frac{20}{100} + \frac{13}{100} \right) \times 51400 - \left(\frac{18 + 8}{100} \times 51,400 \right) \right]$$

= 1799 tonnes

S2. Ans.(b)

Sol. Required percentage =
$$\frac{22 \times 514 - \frac{2}{3} \times 13 \times 514}{22 \times 514} \times 100$$
$$= \frac{4000}{66}$$
$$\approx 60.6\% \text{ (approximately)}$$

S3. Ans.(b)

Sol. Coffee produced in Punjab = Coffee produced in Kerala

$$= \frac{5}{4} \times \frac{20}{100} \times 51400$$

= 12,850 tonnes

$$\therefore \text{ Required ratio} = \frac{12,850}{\frac{10}{100} \times 51,400} = \frac{1,285}{514} = \frac{5}{2}$$

S4. Ans.(d)

Sol. Required percentage =
$$\frac{\left(\frac{8}{9} \times 9 + \frac{2}{1} \times 10\right) \times 514}{51,400} \times 100 = 28\%$$

S5. Ans.(a)

S6. Ans.(e)

Sol. Required ratio =
$$\frac{8\% \times \frac{6}{7}}{20\% \times \frac{5}{4}} = \frac{48}{175}$$

Sol. Let cost price of shoes and jacket per quintal for both companies be 4x and 7x respectively

Profit on shoes by Puma =
$$\frac{(4x\times40)\times20}{100} = 32x$$
Profit on shoes by Adidas =
$$\frac{(4x\times50)\times30}{100} = 60x$$

Profit on shoes by Adidas =
$$\frac{(4x \times 50) \times 30}{100}$$
 = 60x

Total profit on shoes = 92x

Total profit on jackets =
$$\frac{92x}{2} \times 3 = 138x$$

Cost price of jacket by both companies

$$= 7x (60 + 100) = 7x \times 160$$

Required
$$\% = \frac{138x}{7x \times 160} \times 100 \approx 12\%$$

S7. Ans.(c)

Sol. Let cost price per quintal of shoes and jacket be x

In 2011

Profit on shoes
$$\rightarrow \frac{100x \times 25}{100} = 25x$$

Profit on jacket
$$\rightarrow \frac{60x \times 25}{100} = 15x$$

In 2013

Profit on shoes =
$$\frac{60x \times 10}{100} = 6x$$

Profit on jacket =
$$\frac{30x\times10}{100}$$
 = $3x$

Profit on shoes =
$$\frac{60 \times 10}{100} = 6x$$

Profit on jacket = $\frac{30 \times 10}{100} = 3x$
Required % = $\frac{25 \times 6x}{15 \times 3x} \times 100 = 172\%$

S8. Ans.(a)

Sol. Let cost price of shoes and jacket per quintal be 3x and 4x respectively.

In 2013

Profit =
$$\frac{(3x \times 30) \times 10}{100}$$
 = 9x

Selling price of jacket =
$$(4x \times 20) + 9x = 89x$$

In 2014,

$$Profit = \frac{(3x \times 50) \times 20}{100} = 30x$$

Selling price of jacket =
$$(4x \times 70) + 30x = 310x$$

Required ratio =
$$\frac{89x}{310}$$
 = 89 : 310





S9. Ans.(c)

Sol. Profit in
$$2010 = \frac{250 \times 100 \times 30}{100} = 7500$$

Profit in $2011 = \frac{250 \times 50 \times 35}{100} = 4375$
Profit in $2012 = \frac{250 \times 30 \times 15}{100} = 1125$

Profit in
$$2011 = \frac{250 \times 50 \times 35}{250 \times 35} = 4375$$

Profit in
$$2012 = \frac{250 \times 30 \times 15}{100} = 1125$$

Total profit = Rs. 13000

S10. Ans.(b)

Sol. Production of shoes by both companies = 650 quintals Production of jacket by both companies = 550 quintals

Required difference = 100 quintals

S11. Ans.(a)

Sol.

Let cost price of grinder is = 100

And profit = x

$$\frac{x}{100 + (100 + x)} = 16\frac{2}{3}\% \quad [100 + x \Rightarrow S. P.]$$

$$\frac{x}{200 + x} = \frac{1}{6}$$

$$x = 40$$

profit percent = 40%

$$S.P. = 140$$

Mark price =
$$\frac{140}{9} \times 10 = \frac{1400}{9}$$

Now

$$100 \to 1350$$

$$\frac{1400}{9} \to \frac{1350}{100} \times \frac{1400}{9} = 2100$$

S12. Ans.(a)

Sol.

Let S.P for each =x

If profit calculated on C.P then C.P = $x \times \frac{100}{125} = \frac{4x}{5}$

∴ profit earned while calculating it on cost price = $\frac{4x}{5} \times \frac{25}{100} = \frac{x}{5}$

If profit calculated on S.P then profit = $x \times \frac{25}{100} = \frac{x}{4}$

A.T.Q.

$$\frac{x}{4} - \frac{x}{5} = 100$$

$$\therefore$$
 x = Rs. 2000

S13. Ans.(c)

Sol.

Let he offered x% discount on the remaining

S14. Ans.(d)

Sol.

Let cost price of bike = 100x Rs.

So, Transportation cost = 25x Rs.

Total cost of bike = (100x + 25x) = 125xRs.

Marked price of bike = $(100x + 25x) \times \frac{120}{100} = 150x$ Rs.

Selling price of bike = $150x \times \frac{7}{8}$ = 131.25x Rs.

Profit = 131.25x - 125x = 6.25x Rs.

Total new cost price of bike = $100x + 25x \times \frac{120}{100} = 130x$ Rs.

New profit = 131.25x - 130x = 1.25x

Given,

6.25x - 1.25x = 2400

5x = 2400

x = 480 Rs.

Cost price of bike = $480 \times 125 = 60,000 \text{ Rs}$.

S15. Ans.(d)

Sol.

Let marked price of Jeans be Rs. 9x and shirt be Rs. 7x for Divyaraj

CP of jeans for Divyaraj = $9x \times \frac{8}{9} = 8x$ Rs.

CP of shirt for Divyaraj = $7x \times \frac{6}{7} = 6x$ Rs.

Let total number of jeans purchased by Divyaraj be 5y and shirt be 8y

Total cost price for Divyaraj

$$= 8x \times 5y + 6x \times 8y$$

= 88xy

SP of jeans on, which Divyaraj sold

$$= 8x \times \frac{3}{2} \times \frac{3}{4} = 9x$$

SP of shirt on, which Divyaraj sold

$$= 6x \times \frac{3}{2} \times \frac{8}{9} = 8x$$

Total S.P. on which Divyaraj sold all items

$$= 9x \times 5y + 8x \times 8y$$

$$= 45xy + 64xy$$

= 109xy

Required% =
$$\frac{109xy - 88xy}{88xy} \times 100$$

$$=23\frac{19}{22}\%$$





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