

Quiz Date: 26<sup>th</sup> July 2020

**Directions (1-5):** What will come in place of question mark in the following number series?

Q1. 12, 6.5, 11, 7.5, 10, 8.5, ?

- (a) 9.5
- (b) 9
- (c) 10
- (d) 10.5
- (e) 8

Q2. 13, 10, 4, -5, -17, ?

- (a) -34
- (b) -22
- (c) -32
- (d) 34
- (e) -2

Q3. 3645, 1215, 405, 135, ?, 15, 5

- (a) 45
- (b) 75
- (c) 65
- (d) 55
- (e) 35

Q4. 15, 13, 23, 65, 255, ?

- (a) 1249
- (b) 1255
- (c) 1269
- (d) 1275
- (e) 1283

Q5. 1338 2328 3048 3552 3888 4098 ?

- (a) 4288
- (b) 4208
- (c) 4218
- (d) 4298
- (e) 4268

Q6. The ratio of the present ages of a son and his father is 1 : 5 and that of his mother and father is 4 : 5. After 2 years the ratio of the age of the son to that of his mother becomes 3 : 10. What is the present age of the father?

- (a) 30 years
- (b) 28 years
- (c) 37 years
- (d) Data inadequate

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(e) None of these

Q7. The average marks of Rahul decreased by 1 when he replaced the marks of Hindi in which he got 40 marks by two subjects in which he got 23 and 25 marks. Later he also included 57 marks of math due to which the average marks increased by 2. How many subjects were initially?

(a) 20

(b) 15

(c) 30

(d) 10

(e) None of these



Q8. Five persons entered the lift on the ground floor of an 8-floor apartment. Assuming that each one of them independently and with equal probability can leave the lift at any floor beginning with the first. What is the probability that all five persons are leaving the lift at different floors?

(a)  $\frac{381}{2401}$

(b)  $\frac{{}^7C_5}{5^7}$

(c)  $\frac{360}{2401}$

(d)  $\frac{{}^7C_5}{7^5}$

(e)  $\frac{5!}{7^5}$

Q9. If a year has 360 days and all the months with 30 days. What is the probability that your birthday falls on a Monday and that is an even day of an even month, given that January 1 is a Monday?

(a)  $\frac{1}{10}$

(b)  $\frac{13}{360}$

(c)  $\frac{1}{28}$

(d)  $\frac{11}{360}$

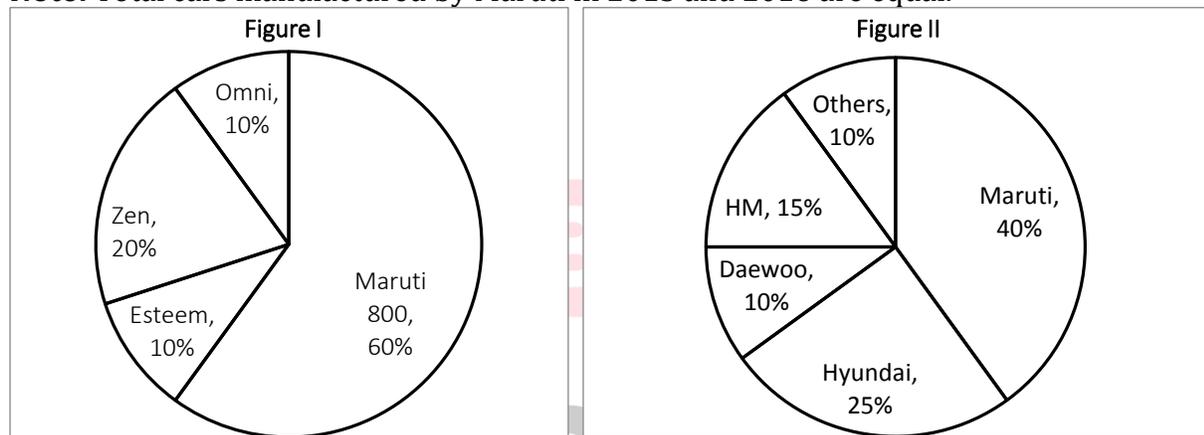
(e) none of these

Q10. From two places, 60 km apart, A and B start towards each other at the same time and meet each other after 6 hours. Had A travelled with  $\frac{2}{3}$  of his speed and B travelled with double of his speed, they would have met after 5 hours. The speed of A is

- (a) 4 km/hr
- (b) 6 km/hr
- (c) 10 km/hr
- (d) 12 km/hr
- (e) None of the above

**Directions (11-15):** Given below are two pie-chart. Ist pie chart shows the distribution of manufacturing of different models of Maruti car company in 2015. IInd pie chart shows the distribution of manufacturing of cars of different car manufacturing companies including Maruti in year 2016.

**Note:** Total cars manufactured by Maruti in 2015 and 2016 are equal.



Q11. If total cars manufactured by Daewoo in 2016 is 12.5% more than cars manufacture by Daewoo in 2015 than what is the ratio of cars manufactured by Daewoo in 2015 to the cars manufactured by Zen in 2015.

- (a) 4 : 3
- (b) 10:9
- (c) 4 : 5
- (d) 3 : 4
- (e) 2 : 3

Q12. What is the ratio of total cars manufactured by Maruti of model Zen and Esteem together in 2015 to the total cars manufactured by others in 2016.

- (a) 3 : 4
- (b) 4 : 3
- (c) 5 : 3
- (d) 6 : 5
- (e) 5 : 6

Q13. If Esteem manufactured in 2015 is 15000 then what will be the average of cars manufactured in 2016 of company Hyundai and Daewoo.

- (a) 60225
- (b) 62625
- (c) 65625
- (d) 52225
- (e) 54625

Q14. If total cars sold by Maruti in 2016 is  $88\frac{8}{9}\%$  of the number of cars manufactured by it in 2016 then numbers of cars manufactured by model Zen of Maruti in 2015 is what percent of total cars sold by Maruti in 2016.

- (a) 25%
- (b) 20%
- (c) 12.5%
- (d) 27.5%
- (e) 22.5%



Q15. What is the ratio of number of cars sold by Hyundai in 2016 to number of cars sold by Maruti 800 in 2015 if Hyundai sold in 2016 is 80% of Hyundai manufactured in 2016 and Maruti 800 sold in 2015 is 90% of Maruti 800 manufactured in 2015.

- (a) 19 : 20
- (b) 25 : 27
- (c) 26 : 27
- (d) 23 : 24
- (e) 21 : 23

### Solutions

**S1. Ans.(b)**

**Sol.** Pattern is

$$-5.5, +4.5, -3.5, +2.5, -1.5, +0.5$$

$$\therefore ? = 8.5 + 0.5 = 9$$

**S2. Ans.(c)**

**Sol.** Pattern is  $-3, -6, -9, -12, -15$

$$\therefore ? = -17 - 15 = -32$$

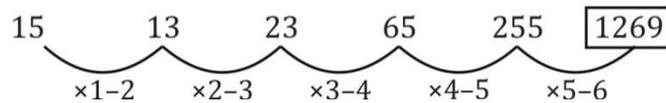
**S3. Ans.(a)**

Sol. Pattern is  $\div 3, \div 3, \div 3, \div 3, \div 3$

$$\therefore ? = 135 \div 3 = 45$$

**S4. Ans.(c)**

Sol.

**S5. Ans (c)**

Sol.  $+(10^3 - 10), (9^3 - 9), (8^3 - 8) \dots$

$$4098 + (5^3 - 5) = 4098 + 120$$

$$= 4218$$

**S6. Ans.(e)**

$$\text{Sol. } \frac{F}{S} = 5, \frac{M}{F} = \frac{4}{5}$$

$$\frac{S+2}{M+2} = \frac{3}{10}$$

Solving the above equations  $S = 7, M = 28, F = 35$

**S7. Ans.(b)**

Sol.

Let the number of subject initially be  $n$  and the initial average be 'a'

$$\therefore na - 40 + 23 + 25 = (a-1)(n+1)$$

$$\Rightarrow a - n = 9 \quad \dots (i)$$

Also,

$$na + 8 + 57 = (a+1)(n+2)$$

$$\Rightarrow na + 65 = na + 2a + n + 2$$

$$\Rightarrow 2a + n = 63 \quad \dots (ii)$$

In solving (i) & (ii)

$$a = 24 \text{ \& } n = 15$$

**S8. Ans (c)**

Sol. A part on the ground floor, there are 7 floors.

A person can leave the lift at any of the seven floors.

Hence, total number of ways in which each of the five persons can leave the lift at any of the 7 floors =  $7^5$

So, sample space =  $7^5$

Five person can leave the lift at five different floor in  ${}^7P_5$  ways

So, favourable number of ways =  ${}^7P_5$

$$\text{Hence the required probability} = \frac{7p_5}{7^5} = \frac{360}{2401}$$

S9. Ans (b)

Sol. Favourable Dates = (Feb 6,20; Apr 2,16,30; Jun 12,26; Aug 8,22; Oct 4,18; Dec 14,28)

$$\text{Required probability} = \frac{13}{360}$$

S10. Ans.(b)

$$\text{Sol. } A + B \text{ ----- } \frac{60}{6} = 10 \text{ km/hr. ....(i)}$$

$$\&\frac{2A}{3} + 2B = \frac{60}{5} = 12 \text{ km/hr .....(ii) ]}$$

Solving (i) & (ii)

$$A = 6 \text{ km/hr}$$



S11. Ans.(b)

Sol.

Let total cars manufactured by Daewo in 2015 =  $200x$

So, Let total cars manufactured by Daewo in 2016 =  $225x$

Cars manufactured by Zen in 2015

$$= \frac{20}{100} \times \frac{225x}{10} \times 40$$

$$= \frac{225x}{5} \times 4$$

$$= 45 \times 4 \times x$$

$$= 180x$$

$$\text{Required ratio} = 200 : 180$$

$$= 10 : 9$$

S12. Ans.(d)

Sol.

Let total cars manufactured in 2016 =  $100x$

Cars manufactured by Maruti in 2016 =  $40x$

Cars manufactured by Zen and Esteem in 2015

$$= \frac{30}{100} \times 40x$$

$$= 12x$$

$$\text{Required ratio} = 12 : 10$$

$$= 6 : 5$$

S13. Ans.(c)

Sol.

Model Esteem of Maruti manufactured in 2015 = 15000

Total Maruti cars manufactured in 2015

$$= \frac{15000}{10} \times 100$$

$$= 1,50,000$$

Average of cars of Hyundai and Daewoo manufactured in 2016

$$= \frac{1}{2} (25 + 10) \times \frac{150000}{40}$$

$$= 65625$$

S14. Ans.(e)

Sol.

Let total cars manufactured of Maruti in 2016 =  $900x$

So, cars sold of Maruti in 2016 =  $800x$

Cars of model Zen manufactured by Maruti in 2015

$$= 900x \times \frac{20}{100}$$

$$= 180x$$

$$\text{Required percentage} = \frac{180}{800} \times 100 = 22.5\%$$

S15. Ans.(b)

Sol.

Let Hyundai cars manufactured in 2016 =  $500x$

So, Hyundai cars sold in 2016 =  $400x$

and

Maruti 800 manufactured in 2015

$$= \frac{500x}{25} \times 40 \times \frac{60}{100}$$

$$= 480x$$

Maruti 800 sold in 2015

$$= \frac{90}{100} \times 480x$$

$$= 432x$$

Required ratio =  $400 : 432$

$$= 25 : 27$$