

Quiz Date: 28th April 2020

Directions (1-5): Find the wrong term in the following series.

Q1. 196, 168, 143, 120, 99, 80, 63

- (a) 168
- (b) 120
- (c) 99
- (d) 196
- (e) 143

Q2. 6072, 1008, 200, 48, 14, 5, 3

- (a) 200
- (b) 1008
- (c) 14
- (d) 5
- (e) 6072

Q3. 2, 6, 24, 96, 285, 568, 567

- (a) 285
- (b) 24
- (c) 567
- (d) 2
- (e) 568

Q4. 258, 130, 66, 34, 18, 8, 6

- (a) 8
- (b) 18
- (c) 6
- (d) 130
- (e) 34

Q5. 4, 10, 22, 46, 96, 190, 382

- (a) 4
- (b) 10
- (c) 96
- (d) 382
- (e) 190

Q6. A sum of amount at $r\%$ compound interest doubles in 3 years. In 9 years, it will be k times of the original principal. What is the value of k ?

- (a) 10
- (b) 9
- (c) 6
- (d) 8



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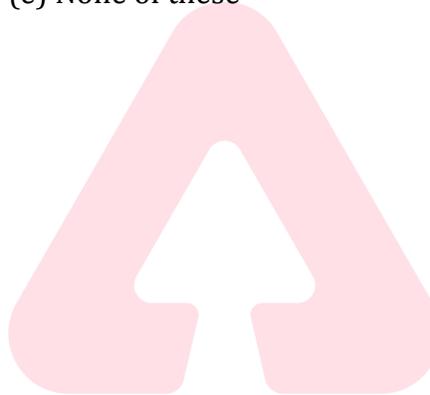
(e) 12

Q7. The ratio of ages of A and B is 8 : 9 and the age of B is two-thirds of C's age and age of C is nine-thirteenths times the age of D. If the age of B is 18 years, then the age of C is:

- (a) 36 years
- (b) 39 years
- (c) 27 years
- (d) 54 years
- (e) 62 years

Q8. The length of a rectangle is three fifth of the side of a square. The radius of a circle is equal to side of the square. The circumference of the circle is 132 cm. What is the area of the rectangle if the breadth of the rectangle is 8 cm?

- (a) 112.4 sq. cm
- (b) 104.2 sq. cm
- (c) 100.8 sq. cm
- (d) Cannot be determined
- (e) None of these



Q9. An urn contains 3 red and 4 green marbles. If three marbles are picked at random, what is the probability that two are green and one is red?

- (a) $\frac{3}{7}$
- (b) $\frac{18}{35}$
- (c) $\frac{5}{14}$
- (d) $\frac{4}{21}$
- (e) $\frac{7}{11}$

Q10. In how many ways can the letters of the word 'SACRED' be arranged so that vowels come together?

- (a) 240
- (b) 120
- (c) 320
- (d) 720
- (e) 5040

Q11. Three vessels contain equal mixtures of milk and water in the ratio 6 : 1, 5 : 2 and 3 : 1 respectively. If all the solutions are mixed together, the ratio of milk to water in the final mixture will be

- (a) 64 : 65
- (b) 65 : 19
- (c) 19 : 65
- (d) 64 : 19
- (e) 39 : 17

Q12. The average income of a person for the first 6 days is Rs. 29, for the next 6 days it is Rs. 24, for the next 10 days it is Rs. 32 and for the remaining days of the month it is Rs. 30. Find the average income per day (Assume month is of 30 days).

- (a) Rs. 31.64
- (b) Rs. 30.64
- (c) Rs. 29.27
- (d) Rs. 34.27
- (e) Rs. 32.27

Q13. A man covers half of his journey by train at 60 km/hr, half of the remainder by bus at 30 km/hr and the rest by cycle at 10 km/hr. Find his average speed during the entire journey.

- (a) 36 kmph
- (b) 30 kmph
- (c) 18 kmph
- (d) 24 kmph
- (e) 28 kmph

Q14. Some amount was lent at 6% per annum at simple rate of interest. After one year, Rs. 6800 is repaid and the rest of the amount is repaid at 5% per annum. If the second year's interest is $\frac{11}{20}$ of the first year's interest, find what amount of money was lent out.

- (a) Rs. 17,000
- (b) Rs. 16,800
- (c) Rs. 16,500
- (d) Rs. 17,500
- (e) Rs. 18,000

Q15. How many kg of tea worth Rs. 25 per kg must be blended with 30 kg of tea worth Rs. 30 per kg so that by selling the blended variety at Rs. 30 per kg there should be gain of 10%?

- (a) 30 kg
- (b) 36 kg
- (c) 32 kg
- (d) 42 kg
- (e) 34 kg

Solutions

S1. Ans.(d)

Sol.

The pattern in the series will be

$$\begin{array}{ccccccc} 195 & 168 & 143 & 120 & 99 & 80 & 63 \\ \hline & \underbrace{\hspace{1.5cm}}_{27} & \underbrace{\hspace{1.5cm}}_{25} & \underbrace{\hspace{1.5cm}}_{23} & \underbrace{\hspace{1.5cm}}_{21} & \underbrace{\hspace{1.5cm}}_{19} & \underbrace{\hspace{1.5cm}}_{17} \end{array}$$

∴ Wrong term is 196

S2. Ans.(b)

Sol.

The pattern should be (from RHS)

$$3 \times 1 + 2 = 5$$

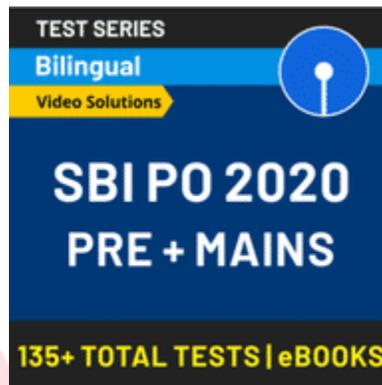
$$5 \times 2 + 4 = 14$$

$$14 \times 3 + 6 = 48$$

$$48 \times 4 + 8 = 200$$

$$200 \times 5 + 10 = 1010$$

$$1010 \times 6 + 12 = 6072$$



S3. Ans.(b)

Sol.

The pattern in the given series should be -

$$\times 6 - 6, \times 5 - 5, \times 4 - 4, \times 3 - 3, \times 2 - 2$$

∴ wrong term is 24

S4. Ans.(a)

Sol.

The pattern is

$$\begin{array}{ccccccc} 258 & 130 & 66 & 34 & 18 & 8 & 6 \\ \hline & \underbrace{\hspace{1.5cm}}_{\times \frac{1}{2} + 1} \end{array}$$

∴ wrong term is 8.

S5. Ans.(c)

Sol.

$$4 \times 2 + 2 = 10$$

$$10 \times 2 + 2 = 22$$

$$22 \times 2 + 2 = 46$$

$$46 \times 2 + 2 = 94 \text{ Not 96}$$

$$94 \times 2 + 2 = 190$$

$$190 \times 2 + 2 = 382$$

S6. Ans.(d)

Sol.

ATQ,

Let principal be Rs. P

$$2p = p \left(1 + \frac{r}{100}\right)^3$$

Cubing both side

$$2^3 = \left[\left(1 + \frac{r}{100}\right)^3\right]^3$$

$$\Rightarrow \left(1 + \frac{r}{100}\right)^9 = 8$$

∴ Principal becomes 8 times.

S7. Ans.(c)

Sol.

$$A : B = 8 : 9$$

$$B = 18 \Rightarrow A = 16$$

$$\therefore C = 18 \times \frac{3}{2} = 27 \text{ years}$$

S8. Ans.(c)

Sol.

Let radius of circle is r cm

$$\therefore 2 \times \frac{22}{7} \times r = 132$$

$$\Rightarrow r = 21 \text{ cm} = \text{side of square}$$

$$\therefore \text{length of rectangle} = \frac{3}{5} \times 21$$

$$= 12.6 \text{ cm}$$

$$\therefore \text{Area of rectangle} = 12.6 \times 8$$

$$= 100.8 \text{ cm}^2$$

S9. Ans.(b)

Sol.

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$$\begin{aligned} \text{Required probability} &= \frac{{}^4C_2 \times {}^3C_1}{{}^7C_3} = \frac{6 \times 3}{35} \\ &= \frac{18}{35} \end{aligned}$$

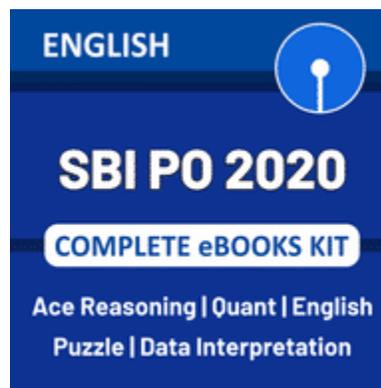
S10. Ans.(a)

Sol.

Required ways

$$= 5! \times 2!$$

$$= 240$$



S11. Ans.(b)

Sol.

$$\text{Total quantity of milk} = \frac{6}{7} + \frac{5}{7} + \frac{3}{4}$$

$$= \frac{65}{28}$$

& that of water

$$= \frac{1}{7} + \frac{2}{7} + \frac{1}{4}$$

$$= \frac{19}{28}$$

∴ Required ratio = 65 : 19

S12. Ans.(c)

Sol.

Average income per day

$$= \frac{6 \times 29 + 6 \times 24 + 10 \times 32 + 8 \times 30}{30}$$

$$= \text{Rs. } 29.27$$

S13. Ans.(d)

Sol.

Let total distance = d km

$$\begin{aligned}\therefore \text{Average speed} &= \frac{d}{\frac{d}{120} + \frac{d}{120} + \frac{d}{40}} \\ &= 24 \text{ km/hr}\end{aligned}$$

S14. Ans.(a)

Sol.

Let Rs. P amount was lent out.

$$\text{S. I. for first year} = \frac{P \times 6 \times 1}{100} = \frac{6P}{100}$$

$$\text{S. I. for second year} = \frac{\left(\frac{106P}{100} - 6800\right) \times 5 \times 1}{100}$$

ATQ,

$$\frac{\left(\frac{106P}{100} - 6800\right) \times 5}{100} = \frac{11}{20} \times \frac{6P}{100}$$

$$\Rightarrow 106P - 680000 = 66P$$

$$\Rightarrow P = 17,000$$

S15. Ans.(b)

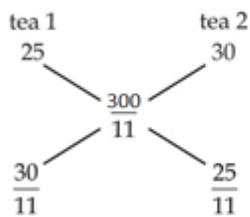
Sol.

C.P. of mixture of tea

$$= 30 \times \frac{100}{110}$$

$$= \frac{300}{11} \text{ rupee/kg}$$

According to law of mixture



$$\therefore \frac{\text{tea1}}{\text{tea2}} = \frac{30}{25} = \frac{6}{5}$$

$$\begin{aligned}\therefore \text{Quantity of tea1} &= \frac{6}{5} \times 30 \\ &= 36 \text{ kg}\end{aligned}$$

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