

Quiz Date: 16th July 2020

Directions (1-5): The following questions are accompanied by three statements I or A, II or B and III or C. You have to determine which statement(s) is/are sufficient/necessary to answer the questions and mark your answer accordingly

Q1. What is the age of the Renuka in her family?

- I. Total age of Renuka, her father, her mother & her sister is 90 years.
 - II. Average age of Renuka, her mother and her sister is 18 years and 4 months.
 - III. Average age of her mother and sister is four seventh of her father's age.
- (a) Only I & II
 - (b) Only I & III
 - (c) Only II & III
 - (d) All I, II & III
 - (e) None of these

Q2. What is the selling price of the sofa set if no discount is offered?

- I. Profit earned was 20%
 - II. Had 10% discount been offered on selling price the profit would have been Rs. 1200.
 - III. Cost price is Rs. 15000.
- (a) Any two of the three
 - (b) Only I & II
 - (c) Only I & III
 - (d) Only II & III
 - (e) None of these

Q3. 12 girls and 8 children can complete a piece of work in 24 days together. How many days will it take for 12 men and 12 girls to complete the same work?

- A. 2 men can do as work as 3 girls and 2 children can do together.
 - B. 3 girls can do as work as 6 children can do.
 - C. All of them together can complete the entire work in $768/67$ days.
- (a) Any two of them
 - (b) Only from A and B
 - (c) Only C
 - (d) Either A or B only
 - (e) No need of any information

Q4. A train crosses a platform in 24 sec. Find out the length of the platform.

- A. Ratio between the lengths of a tunnel and the train is 7 : 5.
 - B. The train crosses the tunnel in 18 sec.
 - C. The speed of the train is 54 km/hr.
- (a) Only A and B together
 - (b) Only B and C together
 - (c) Only A and C together
 - (d) Questions can't be answered even after using all the information
 - (e) All statements are required

Q5. What is the marked price of the laptop?

A. Shopkeeper gives 15% discount on the laptop and he earns a total profit of 20 percent.

B. The cost price of a table is 40% less than the cost price of laptop.

C. By selling the table in Rs.560 a profit of 10 percent is earned.

(a) Only A or B alone

(b) Only B or C alone

(c) Only A and C together

(d) Any two of them together

(e) All statements are necessary.

Q6. The ratio of the radii of two right circular cylinders (A and B) is 2 : 5. The ratio of the heights of cylinders A to B is 3 : 1. What is the ratio of the volumes of cylinders A to B?

(a) 12 : 25

(b) 9 : 25

(c) 9 : 20

(d) 3 : 5

(e) 12 : 35

Q7. The ratio between area of a rectangular field and area of a square field is 3 : 2. If the area of rectangular field is equal to 216 sq. metre, what is the perimeter of the square field ?

(a) 50 m

(b) 45 m

(c) 48 m

(d) 32 m

(e) 36 m



Q8. The length and breadth of the floor of a room are 20 feet and 10 feet respectively. Square tiles of 2 feet length of three different colours are to be laid to the floor. Black tiles are laid in the first row on all sides. If white tiles are laid in the one-third of the remaining and blue tiles in the rest, how many blue tiles will be there?

(a) 48

(b) 32

(c) 16

(d) 24

(e) 64

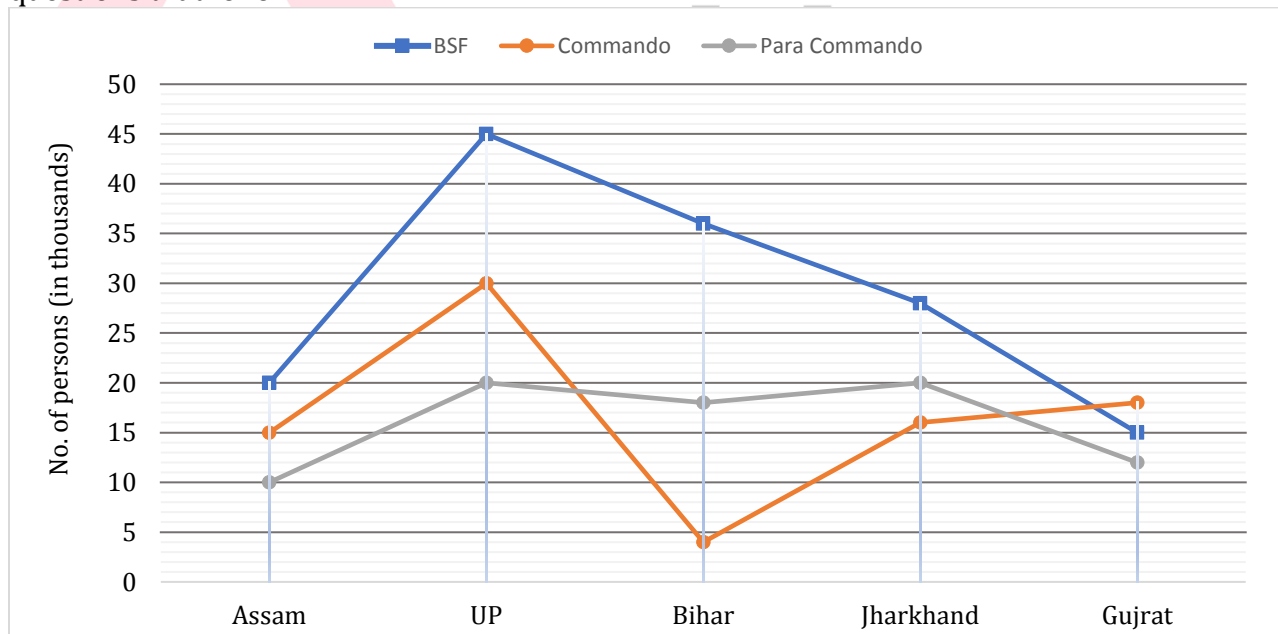
Q9. A playground is in the shape of a rectangle. A sum of Rs. 1000 was spent to make the ground usable at the rate of 25 paise per sq. m. The breadth of the ground is 50m. If the length of the ground is increased by 20 m, what will be the expenditure in making this ground usable at the same rate?

- (a) Rs.1500
- (b) Rs.2250
- (c) Rs.1250
- (d) Rs.1000
- (e) Rs. 1800

Q10. A large solid metallic cylinder whose radius and height are equal to each other is to be melted and 48 identical solid balls are to be recast from the liquid metal so formed. What is the ratio of the radius of a ball to the radius of the cylinder?

- (a) 1 : 16
- (b) 1 : 12
- (c) 1 : 8
- (d) 1 : 4
- (e) None of these

Directions (11-15): The following line graph shows the no. of persons who were found physically fit in army training for three different posts from five different states of India. The table shows percentage of female in them. Study both the graphs carefully to answer the questions that follow:



Posts	Percentage of Females				
	Assam	UP	Bihar	Jharkhand	Gujrat
BSF	10	25	20	15	30
Commando	25	36	30	20	18

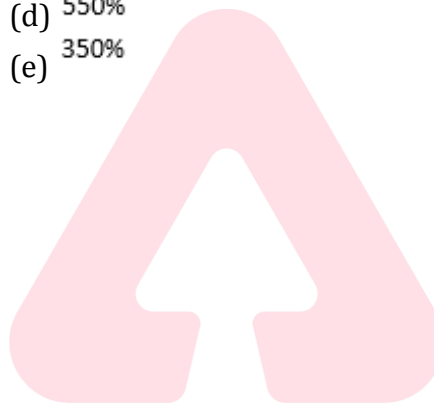
Para Commando	16	32	28	20	24
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Q11. Find the total no. of males who were physically fit for BSF from all the five states together. (in thousands)

- (a) 14.85
- (b) 114.85
- (c) 115.45
- (d) 112.85
- (e) 116.85

Q12. The total no. of females for commando post from UP is what percent more than the no. of females for the same post from Gujrat?

- (a) $160\frac{2}{3}\%$
- (b) 50%
- (c) $233\frac{1}{3}\%$
- (d) 550%
- (e) 350%



Q13. What is the difference between total no. of males from Bihar and total no. of males from Gujrat for all the three posts who were physically fit.

- (a) 10180
- (b) 8600
- (c) 8040
- (d) 8160
- (e) 8406

Q14. Total no. of females from UP and Assam together for the post of commando is approximately what percent of total no. of females from Bihar and Jharkhand for the same post who were physically fit?

- (a) 195%
- (b) 145%
- (c) 270%
- (d) 330%

(e) 167%

Q15. What is the difference between total no. of persons from all the five states together for the post commando and total no. of persons for the post para commando from all the five states together?

- (a) 4000
 (b) 3000
 (c) 5000
 (d) 7000
 (e) 1000

Solutions

S1. Ans.(d)

Sol.

$$\text{From A, } R + F + M + S = 90$$

$$\text{From B, } R + M + S = 18\frac{1}{3} \times 3$$

$$\text{From C, } M + S = \frac{4}{7} \times 2F$$

From all three statements together, the answer can be obtained.

S2. Ans.(a)

Sol.

From I & II,

Let CP = x

$$\text{S.P.} = \frac{6x}{5}$$

$$\text{Now, New S.P.} = \frac{6x}{5} \times \frac{90}{100} = \frac{54x}{50}$$

$$\Rightarrow \frac{54x}{50} - x = 1200$$

$$\Rightarrow x = 15000$$

$$\therefore \text{SP.} = 18000$$

& from III & I, we can obtain selling price.

& from II & III,

Let S.P. = x

When 10% discount,

$$\text{S.P.} = \frac{9x}{10}$$

$$\therefore \frac{9x}{10} - 15000 = 1200$$

$$\Rightarrow x = 18000$$

Thus, any two of the three statements are required.

S3. Ans.(b)

Sol.

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$$12G + 8C \rightarrow 24 \text{ days}$$

$$\Rightarrow 3G + 2C \rightarrow 24 \times 4 \text{ days}$$

From A,

$$2M = (3G + 2C)$$

$$\Rightarrow 2M \rightarrow 24 \times 4 \text{ days}$$

$$\Rightarrow 1M \rightarrow 24 \times 4 \times 2 \text{ days}$$

From B,

$$3G = 6C$$

$$\Rightarrow G = 2C$$

$$\Rightarrow (12 + 4)G \rightarrow 24 \text{ days}$$

$$\Rightarrow 1G \rightarrow 24 \times 16 \text{ days}$$

$$\therefore \text{from A + B, } 12M + 12G \rightarrow \left(\frac{1}{24 \times 8} + \frac{1}{24 \times 16} \right) \times 12$$

$$\rightarrow \frac{1}{16} + \frac{1}{32}$$

$$\rightarrow \frac{32}{3} \text{ days}$$

From C,

Not known no. of persons.

S4. Ans.(e)

Sol.

Let length of platform = x m

$$\therefore \text{speed} = \frac{x + \text{length of train}}{24}$$

From A, Length of tunnel

$$= \frac{7}{5} \times \text{length of train}$$

$$\text{From A+B, length of train} = 18 \times v \times \frac{5}{12}$$

$$\text{From C, } v = 54 \times \frac{5}{18}$$

$$= 15 \text{ m/sec}$$

All statements are required

S5. Ans.(e)

Sol.

Let M.P of laptop = $100x$

From A, SP of laptop = $85x$

$$\text{From B, CP of table} = 85x \times \frac{100}{120} \times \frac{60}{100}$$

$$\text{From C, } 85x \times \frac{100}{120} \times \frac{60}{100} \times \frac{110}{100} = 560$$

From all three statements together,
the answer can be obtained.

S6. Ans.(a)

Sol.



Let the radius of cylinder A be $2x$ and that of cylinder B be $5x$.

Now, height of cylinder A = $3y$ and

height of cylinder B = y

Now, volume of cylinder A = $\pi r^2 h$

$$= \frac{22}{7} \times (2x)^2 \times 3y$$

$$= \frac{22}{7} \times 12x^2y$$

Volume of cylinder B = $\pi r^2 h$

$$= \frac{22}{7} \times (5x)^2 \times y$$

$$\therefore \text{Reqd. ratio} = \frac{\frac{22}{7} \times 12x^2y}{\frac{22}{7} \times 25x^2y} = 12:25$$

S7. Ans.(c)

Sol.

Area of square field = a^2

$$= \frac{2}{3} \times 216$$

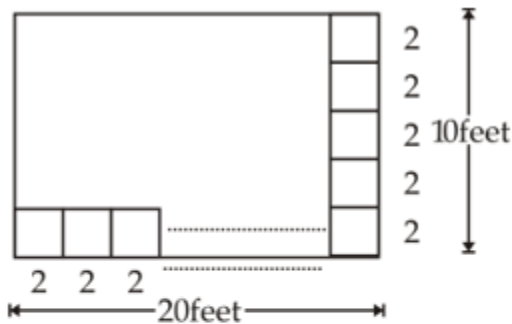
$$= 144 \text{ sq. m.}$$

$\therefore a = 12 \text{ m}$

\therefore Required perimeter = 48 m

S8. Ans.(c)

Sol.



Total black tiles = $10 \times 2 + 2 \times 3$

$$= 26$$

\therefore Remaining area = $20 \times 10 - 26 \times 2^2$

$$= 96 \text{ sq. feet}$$

\therefore No. of blue tiles = $\frac{2}{3} \times \frac{96}{4}$

$$= 16$$

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S9. Ans.(c)

Sol.

$$\text{Area of ground} = \frac{1000}{0.25} = 4000 \text{ m}^2$$

$$\text{Breadth} = 50 \text{ m}$$

$$\text{Length} = \frac{4000}{50} = 80 \text{ m}$$

$$\text{New length} = 80 + 20 = 100 \text{ m}$$

$$\text{New area} = 100 \times 50 = 5000 \text{ m}^2$$

$$\text{So, expenditure} = 5000 \times 0.25 = \text{Rs } 1250$$

S10. Ans.(d)

Sol. Suppose radius of the cylinder is R and that of the spherical ball is r, then according to the given condition,

$$\pi R^2 \times R = 48 \times \frac{4\pi}{3} \times r^3$$

$$\Rightarrow \frac{R^3}{r^3} = 64 \text{ or } R : r = 4 : 1$$

$$r : R = 1 : 4$$



S11. Ans.(b)

Sol.

Required total no. of males

$$= \frac{90}{100} \times 20 + \frac{75}{100} \times 45 + \frac{80}{100} \times 36 + \frac{85}{100} \times 28 + \frac{70}{100} \times 15$$

$$= 114.85 \text{ thousand}$$

S12. Ans.(c)

Sol.

Required percentage

$$= \frac{30 \times 36 - 18 \times 18}{18 \times 18} \times 100$$

$$= 233 \frac{1}{3} \%$$

S13. Ans.(a)

Sol.

no. of males from Bihar

$$= \left(\frac{80}{100} \times 36 + \frac{70}{100} \times 4 + \frac{72}{100} \times 18 \right)$$

$$= 44.56 \text{ thousand}$$

no. of males from Gujrat

$$= \left(\frac{70}{100} \times 15 + \frac{82}{100} \times 18 + \frac{76}{100} \times 12 \right)$$

$$= 34.38 \text{ thousand}$$

∴ Required difference = 44.56 – 34.38 = 10.18 thousands

S14. Ans.(d)

Sol.

Total no. of females from UP and Assam
together for the post commando

$$\frac{36}{100} \times 30 + \frac{25}{100} \times 15$$

$$= 14.55 \text{ thousand}$$

Total no. of females from Bihar and Jharkhand
together for the post of commando

$$= \frac{30}{100} \times 4 + \frac{20}{100} \times 16$$

$$= 4.4 \text{ thousand}$$

$$\therefore \text{Required percentage} = \frac{14.55}{4.4} \times 100$$

$$\approx 330\%$$

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S15. Ans.(b)

Sol.

Required difference

$$= (15 + 30 + 4 + 16 + 18) - (10 + 20 + 18 + 20 + 12)$$

$$= 3 \text{ thousand}$$

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