



Bipin Nambiar
(SBI PO 2018)



Shiraz Khan
(SBI Clerk 2018)



Kuldeep Yadav
(SBI PO 2018)



Rajat Saxena
(IBPS Clerk 2018)



Anupam Tyagi
(IBPS PO 2018)

FRIENDS!
WE USED **TESTZONE**
AND CRACKED BANK EXAMS

बैंक परीक्षाओं के लिए निश्चित
रूप से सर्वश्रेष्ठ मॉक
टेस्ट सीरीज

IT'S YOUR TURN NOW
TAKE A **FREE** MOCK TEST



Smartkeeda
The Question Bank

Mixed Maths Questions for SSC 10 + 2 and CGL Tier-I exams

SSC Maths Quiz 3

Directions: Read the following questions carefully and choose the right answer.

1. There are 45 personnel in an army camp. If the number of personnel increases by 9, the expenses of mess increase by Rs. 54 per day, while the average expenditure per person diminishes by 1. Find the original expenditure of the mess.

- A. Rs. 420
B. Rs. 540
C. Rs. 260
D. Rs. 640

2. The ratio of quantity of water in fresh fruits to that of dry fruits is 7 : 2. If 400 kg of dry fruits contain 50 kg of water then find the weight of the water in same fruits when they were fresh?

- A. 175 Kg
B. 100 Kg
C. 150 Kg
D. 125 Kg



Smartkeeda

The Question Bank

3. If the ratio of simple interest and principal is $8 : 25/2$ and rate of interest is equal to the time invested then find the time of investment?

- A. 12 years
B. 16 years
C. 10 years
D. 8 years

4. 4 men can develop a mobile app in 3 days. 3 women can develop the same app in 6 days, whereas 6 boys can develop it in 4 days. 3 men and 6 boys worked together for 1 day. If only women were to finish the remaining work in 1 day, how many women would be required?

- A. 9
B. 12
C. 8
D. 10

5. A student rides on a bicycle at 5 km/hr and reaches his school 3 minute late. The next day he increased his speed to 7 km/hr and reached school 3 min early. Find the distance between his house and the school.

- A. 3 km
B. 2.75 km
C. 5 km
D. None of these

5. A student rides on a bicycle at 5 km/hr and reaches his school 3 minute late. The next day he increased his speed to 7 km/hr and reached school 3 min early. Find the distance between his house and the school.

- A. 3 km
B. 2.75 km
C. 5 km
D. None of these

6. An E-commerce website offers cashback of 15% on the marked price of a certain item and earns a profit of 19% on it. If the difference between the cashback offered and the profit earned is Rs. 150, find the cost price of the item.

- A. Rs. 5000
B. Rs. 7500
C. Rs. 6000
D. Rs. 8000

7. The curved surface area and the total surface area of a cylinder are in the ratio 1 : 3. If total surface area is 616 cm^2 then find the volume of water which it can store.

- A. $\frac{4312}{3\sqrt{3}} \text{ cm}^3$
B. $\frac{4310}{3\sqrt{3}} \text{ cm}^3$
C. $\frac{4300}{3\sqrt{3}} \text{ cm}^3$
D. $\frac{432}{3\sqrt{3}} \text{ cm}^3$



Smartkeeda
The Question Bank

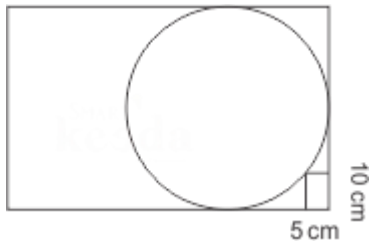
8. There is a piece of land 10,000 metre square which is to be sold at the rate of Rs. 2000 per square metre. If a man has Rs. 2,50,000 with him, find the percentage of land that he can purchase with this amount.

- A. 1.04%
B. 2.1%
C. 1.25%
D. 3.1%

9. If $\frac{x^{12} + x^3}{x^6} = 0$, find $x^{36} + \frac{1}{x^{36}}$

- A. 1
B. 2
C. 0
D. -1

10. In the following figure, a circle is placed in a rectangle with another rectangle of dimension $10 \text{ cm} \times 5 \text{ cm}$ whose one vertex coincides with vertex of bigger rectangle and opposite vertex lies on circumference of circle. Find the radius of circle.



A. 25 cm

B. 35 cm

C. 40 cm

D. 20 cm



Smartkeeda

The Question Bank

Join us on Telegram for more **PDFs**
Click here



Correct answer:

1	2	3	4	5	6	7	8	9	10
B	A	D	A	D	B	A	C	B	A

Explanation:

1. Let the average expenditure per personnel = Rs. x

$$\Rightarrow \text{Original total expenses} = \text{Rs. } 45x$$

$$\text{Now total expenses} = \text{Rs. } (45x + 54)$$

$$\& \text{ new average expenditure per personnel} = \text{Rs. } (x - 1)$$

$$\therefore \frac{45x + 54}{45 + 9} = \frac{45x + 54}{54} = (x - 1)$$

$$\Rightarrow 45x + 54 = 54x - 54$$

$$\text{or, } x = 12$$

$$\therefore \text{The original expenditure} = 45 \times 12 = \text{Rs. } 540$$

Hence, option B is correct.

2. Here, the weight of water in 400 kg of dry fruits is 50 kg.

$$\text{So, the weight of fruits alone} = (400 - 50) \text{ kg} = 350 \text{ Kg}$$

$$\text{Here, Ratio of water in fresh fruits to the dry fruit} = 7 : 2$$

$$\Rightarrow 2 = 50 \text{ Kg}$$

$$\therefore 1 = 25 \text{ kg}$$

$$\text{So, the water in fresh fruits} = 7 \times 25 = 175 \text{ kg}$$

Hence, option A is correct.



3. Let the rate of interest be $r\%$ per annum.

We have ratio of simple interest to principal is = 16 : 25

then SI = $16x$ and Principal $25x$

And, rate of interest = time = r

$$\Rightarrow 16x = \frac{25x \times r \times r}{100}$$

$$\Rightarrow r^2 = 16 \times 4$$

$$\therefore r = 8$$

Here, the time of investment is 8 years.

Hence, option D is correct.

4. \therefore 4 men can develop a mobile app in 3 days.

$$\therefore 3 \text{ men can develop it in } \frac{3 \times 4}{3}$$

$$= 4 \text{ days}$$

6 boys can develop the mobile app in 4 days

App work done by 3 men and 6 boys in one day

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

$$\therefore \text{Remaining work} = 1 - \frac{1}{2} = \frac{1}{2} \text{ of the work}$$

\therefore 3 women can develop the app in 6 days

\therefore 18 women can develop the work in 1 day

Hence, to finish $1/2$ app development in 1 day by women

We require only = $18 \times (1/2) = 9$ women

Hence, option A is correct.

5. We know when distance remains constant then product of time and speed will also be same.

Let the time at which a student should reaches his school be t hrs.

Therefore we have,

$$5 \left(t + \frac{3}{60} \right) = 7 \left(t - \frac{3}{60} \right)$$

On solving above equation ,we get

$$300t + 15 = 420 t - 21$$

$$t = \frac{36}{120} \text{hrs.}$$

$$t = \frac{3}{10} \text{hrs.}$$

Distance = Speed \times time

Distance

$$= 5 \left(\frac{3}{10} + \frac{3}{60} \right)$$

$$= 1.75 \text{ km}$$

Hence, option D is correct.

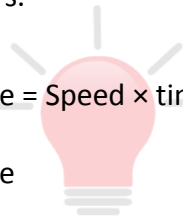
6. Let the cost price of the article be Rs. x .

Then, SP of the article = $1.19x$

And, MP of the article =

$$\frac{1.19x}{1 - 0.15} = \frac{1.19x}{0.85} = 1.4 x$$

Difference = Discount offered – profit earned = 150



Smartkeeda
The Question Bank

$$\text{Then, } 1.4x \times 0.15 - 0.19x = 150$$

$$\text{or, } 0.21x - 0.19x = 150$$

$$\text{or, } 0.02x = 150$$

$$\text{or, } x = 7500$$

$$\therefore \text{ Cost price of the item} = \text{Rs. } 7500$$

Hence, option B is correct.

7. We have ,

$$\frac{2\pi rh}{2\pi rh + 2\pi r^2} = \frac{1}{3}$$

Solving this we get ,

$$4\pi rh = 2\pi r^2$$

$$2h = r \dots\dots\dots \text{equation A}$$

$$2\pi rh + 2\pi r^2 = 616 \dots\dots\dots \text{equation B}$$

From A and B, we get

$$\pi r^2 + 2\pi r^2 = 616$$

$$3\pi r^2 = 616$$

$$r^2 = 616 \times \frac{7}{22} \times \frac{1}{3}$$

$$r^2 = 28 \times \frac{7}{3}$$

$$r = \frac{14}{\sqrt{3}} \text{ cm}$$

Using equation A ,we get

$$h = \frac{7}{\sqrt{3}} \text{ cm}$$



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

$$= \frac{22}{7} \times \frac{14}{\sqrt{3}} \times \frac{14}{\sqrt{3}} \times \frac{7}{\sqrt{3}} = \frac{4312}{3\sqrt{3}} \text{ cm}^3$$

Hence, option A is correct.

8. Piece of land purchased by man

$$= \frac{250000}{2000} = 125 \text{ m}^2$$

\therefore Percentage of land that he can purchase with this amount

$$= \frac{125 \times 100}{10000} \% = \frac{5}{4} \% = 1.25\%$$

Hence, option C is correct.

- 9.

$$\frac{x^{12} + x^3}{x^6} = 0$$

$$\frac{x^{12}}{x^6} + \frac{x^3}{x^6} = 0$$

$$x^6 + \frac{1}{x^3} = 0$$

$$x^6 = -\frac{1}{x^3}$$

$$x^9 = -1$$

$$x^{9 \times 4} = (-1)^4$$

$$x^{36} = 1$$

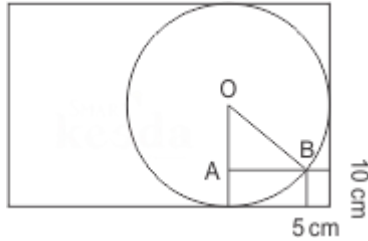
Therefore,

$$x^{36} + \frac{1}{x^{36}} = 1 + 1 = 2$$

Hence, option B is correct.



10.



Let the radius of the circle is 'r'.

We have, $AB = r - 5$

$OA = r - 10$

We have, triangle OAB is a right angled triangle at A.

Therefore using Pythagoras theorem, we get

$$OB^2 = OA^2 + AB^2$$

$$r^2 = (r - 10)^2 + (r - 5)^2$$

$$r^2 = r^2 + 100 - 20r + r^2 + 25 - 10r$$

$$r^2 - 30r + 125 = 0$$

Solving above equation we get

$$r = 25, 5$$

Since r is clearly bigger than 5 cm, we can take the radius of the circle as 25 cm.

Therefore $r = 25$ cm.

Hence, option A is correct.

Join us on Telegram for more PDFs
Click here





SmartKeeda

The Question Bank

Presents

TestZone

India's least priced Test Series platform



ALL BANK EXAMS

2019-20 Test Series

@ Just

₹ 499/-

300+ Full Length Tests

- Brilliant Test Analysis
- Excellent Content
- Unmatched Explanations

JOIN NOW