



CLAT 2020

TEST SERIES PLAN

BY NLU & NUJS TOPPERS

35
FULL LENGTH
TESTS

₹ **2499/-**

JOIN NOW

by

TestZone

INDIA'S LEAST PRICED TEST SERIES

- Brilliant Test Analysis
- Excellent Content
- Unmatched Explanations

JOIN NOW

Maths Questions for CLAT Exam

CLAT Maths Quiz 27

Directions: Read the following Questions carefully and choose the right answer:

1. Ambani can swim 9 km/hr in still water. It takes him twice as long as to swim up as to swim down. Find the rate of stream of the river?

- A. 3 km/hr
B. 6 km/hr
C. 5 km/hr
D. 4 km/hr

2. Ravi deposited Rs. 40,000 in a fixed deposit at the rate of 20% per annum simple interest. At the end of the second year he adds his interest earned to the principal. The interest earned on the new principal at the end of the fourth year is:

- A. 24000
B. 21800
C. 22400
D. 38400

3. If the cost price and selling price of an article are in the ratio of 9 : 11, then find the percentage of profit.

- A. $21\frac{9}{2}\%$
B. $22\frac{2}{9}\%$
C. $22\frac{7}{9}\%$
D. $21\frac{2}{9}\%$

4. Unit digit of $13 + 23 + 33 + 43 + \dots + 993$?

- A. 1
B. 2
C. 0
D. 3

5. A container contains 50 liters of orange juice. 5 liters of orange juice were taken out from the container and replaced by water. This process was repeated further for two times. How much orange juice is there in the container now?

- A. 32.45 litres
B. 34.45 litres
C. 35.75 litres
D. 36.45 litres

6. Anuj began a business with Rs. 550 and was joined afterwards by Brijesh with Rs. 330. When did Brijesh join, if profit at the end of the year was divided in the ratio of 10 : 3?

- A. After 3 months
B. After 5 months
C. After 4 months
D. After 6 months

7. A can do a piece of work in 4 hours. B and C can do it in 3 hours. A and C can do it in 2 hours. How long will B alone take to do it?

- A. 10 hours
B. 12 hours
C. 8 hours
D. 24 hours

8. The average age of 5 sons in a family is 9 years. Average age of sons and parents is 24 years. If father is 9 years older than the mother, then find the age of the father after 17 years.

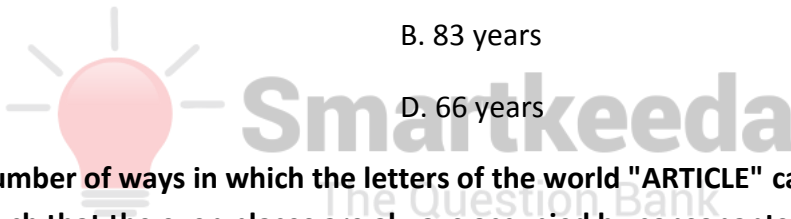
- A. 74 years
B. 83 years
C. 78 years
D. 66 years

9. Find the number of ways in which the letters of the word "ARTICLE" can be rearranged such that the even places are always occupied by consonants:

- A. $4! - 2!$
B. 576
C. $2(4!)$
D. $4(2!)$

10. The time duration of 2 hour 30 minutes is what percent of a day?

- A. 7.218%
B. 10.41%
C. 8.3%
D. 8.24%



Join us on Telegram for more PDFs
Click here



Correct Answers:

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

Explanations:

1.

$$\frac{\text{Time taken in upstream}}{\text{Time taken in downstream}} = \frac{2}{1}$$

Since, Speed $\propto \frac{1}{\text{time}}$

$$\frac{\text{Downstream speed}}{\text{Upstream speed}} = \frac{2}{1} \text{ i.e. } \frac{B + R}{B - R} = \frac{2}{1}$$

Here,

B: speed of boat in still water

R: speed of stream

$$\Rightarrow \frac{B}{R} = \frac{3}{1} \text{ (by componendo – dividendo)}$$

$$\Rightarrow \frac{9}{R} = \frac{3}{1}$$

$$\Rightarrow R = 3 \text{ km/hr}$$

Hence, option (A) is correct.

2. Interest earned at the end of the 2nd year is:

$$\text{Int.} = \frac{40000 \times 20 \times 2}{100} = 400 \times 40 = 16000$$

So, the two years interest is Rs 16000.

Now the new principal is = 40000 + 16000 = 56000



Int. at the end of fourth year

$$\Rightarrow \frac{56000 \times 20 \times 2}{100} = 560 \times 40 = 22400$$

Hence, option (C) is correct.

3. Let the cost price be Rs 9 and selling price of article = Rs 11

$$\therefore \text{Gain percent} = \frac{11 - 9}{9} \times 100\%$$

$$= \frac{2}{9} \times 100\%$$

$$\Rightarrow \frac{200\%}{9} = 22\frac{2}{9}\%$$

Hence, option (B) is correct.

4. Unit digit of $1^3 + 2^3 + 3^3 + 4^3 + \dots + 99^3$

\Rightarrow Sum of cubic series of natural numbers is

$$\Rightarrow \left[\frac{n(n+1)}{2} \right]^2$$

$$\Rightarrow \frac{(99 \times 100)}{2} = 4950$$

Here, the digit at the unit place is zero.

Hence, the option C is the correct.

5. When a container contains x quantity of liquid from which y units are taken out and replaced by water, after n operations, the quantity of pure liquid

$$= x \left(1 - \frac{y}{x} \right)^n$$

Hence juice now contained by the container

$$= 50 \left(1 - \frac{5}{50} \right)^3 = 50 \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10} = 36.45 \text{ litres}$$

Hence, option (D) is correct.

6. Let Brijesh joined after x months.

Then,

Anuj's capital x Anuj's duration : Brijesh's capital x Brijesh's duration

$$550 \times 12 : 330 \times (12 - x) = 10 : 3$$

$$\frac{5 \times 12}{3 \times (12 - x)} = \frac{10}{3}$$

$$\Rightarrow \frac{6}{12 - x} = 1$$

$$\Rightarrow 6 = 12 - x \Rightarrow x = 12 - 6 = 6$$

Hence, Brijesh joined after 6 months.

Option D is hence the correct answer.

7. A's one hour's work = $\frac{1}{4}$

$$(B + C) \text{ 's one hour's work} = \frac{1}{3}$$

$$(A + C) \text{ 's one hour's work} = \frac{1}{2}$$

$$(A + B + C) \text{ 's one hour's work} = 1/4 + 1/3 = 7/12$$

$$\text{and B's one hour's work} = \frac{7}{12} - \frac{1}{2} = \frac{7-6}{12} = \frac{1}{12}$$

Hence, B alone can do the work in 12 hours.

Hence, option B is correct.

8. The average age of 5 sons in a family is 9 years.

$$\text{Total age of 5 sons} = 45 \text{ years}$$

Average age of sons and parents is 24 years.

Total age of 5 sons, father's and mother's = $24 \times 7 = 168$ years

Total age of father and mother = $168 - 45 = 123$ years

Let the mother's age = x , then father's age = $x + 9$

$$x + x + 9 = 123$$

$$2x = 114$$

$$x = 57 \text{ years}$$

Hence father's age after 17 years = $57 + 9 + 17 = 83$ years

Therefore, option (B) is correct.

9. Number of ways to fill 3 even places by 4 consonants = 4P_3

After filling the even places, remaining places can be filled in 4P_4 ways

So, the required number of words = ${}^4P_3 \times {}^4P_4 = 24 \times 24 = 576$

Hence, option B is correct.

10. 2 hour 30 minutes

$$= 2\frac{1}{2} \text{ hours} = \frac{5}{2} \text{ hours}$$

1 Day consists of = 24 hours

$$\therefore \text{Reqd. \%} = \frac{(5/2)}{24} \times 100$$

$$= \frac{5}{2 \times 24} \times 100 = 10.41\%$$

Hence, option B is correct.

Join us on Telegram for more PDFs
Click here





CLAT 2020

TEST SERIES PLAN

BY NLU & NUJS TOPPERS

35
FULL LENGTH
TESTS

₹ **2499/-**

JOIN NOW

by

TestZone

INDIA'S LEAST PRICED TEST SERIES

- Brilliant Test Analysis
- Excellent Content
- Unmatched Explanations

JOIN NOW