Quantitative Aptitude Question Answers

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QUESTION

Q:- A petrol tank at filling station has a capacity of 400 liters. The attendant sells 40 liters of petrol form tank to one customer and then adulterates it with 40 liters of kerosene. This process was repeated with three customers. Then the quantity (in liters) of pure petrol received by fourth customer, if he purchases 40 liters of adulterated petrol, is

(a) 29.16 **(b) 30**

(c) 10.16 **(d) 19.16**

EXPLANATION

Petrol left out after n^{th} operation :- $[(a-b)/a]^n$ X a

Petrol left out after 3^{rd} operation :- $[(400-40)/400]^3$ X 400 = 291.6 L

The quantity (in liters) of pure petrol received by fourth customer :-

P : K = 291.6 : 108.4

291.6/400 X 40 = 29.16 L

QUESTION

Q:- A beaker full with pure cola, Mohit withdraws 25% of cola and replaces it with water. He again withdraws 25% of mixture of cola and again replace it with water and the process was repeated two more times till he find 567 ml of pure cola left in mixture. Then the actual initial quantity (in ml) of cola was

(a) 1792 **(b) 1000**

(c) 1296 **(d) None of these**

EXPLANATION

Cola left out after n^{th} operation :- $[(a-b)/a]^n$ X a

Cola left out after 4^{th} operation :- $[(a-0.25a)/a]^4$ X a = 567 L

0.75^4 X a = 567

a = 1792 L

QUESTION

Q:- $(17)^{23} + (19)^{23}$ is not divisible by

(a) 36

(b) 16

(c) 9

(d) 18

EXPLANATION

$(17)^{23} + (19)^{23}$

$(17 + 19)\ K = 36\ K$

QUESTION

Q:- The cost of a diamond is directly proportional to square of its weight. The value of % loss, if diamond breaks in two pieces having weights in ratio 6 : 4, is

(a) 24

(b) 48

(c) 37.5

(d) 50

EXPLANATION

$D_c \alpha W^2$ (let initial weight 10)

$D_c = K (10)^2 = 100 K$

D= 10

First part after break = $K 6^2 = 36 K$

Second part after break = $K 4^2 = 16 K$

Total after break = 52K

Loss = [(100 – 52)/100] X 100 = 48%

QUESTION

Q:- The number of all four digit numbers which are divisible by 4, that can be formed from 1, 2, 3, 4 and 5.

(a) 125 **(b) 90**

(c) 120 **(d) 100**

EXPLANATION

The last 2 digits must be divisible by 4.

When the last digit is 2, the digit in tens place can be 1, 3, 5. Since there is no restriction on the repetition of digits, the number of ways in the hundredth place and thousandth place can be 5 ways each.

So the number of 4 digit numbers ending with 2 is 1 * 3 * 5 * 5 = 75.

When the last digit is 4, the digit in the tens place can be 2, 4 ; the number of ways in the hundredth place and thousandth place can be 5 ways each.

So the number of 4 digit numbers ending with 4 is 1 * 2 * 5 * 5 = 50.

Therefore the total number of 4 digit numbers that can be formed that is divisible by 4 is 125.

QUESTION

Q:- The units digit of 2! + 4! + 6! + 8!....+ 98! will be?

(a) 2

(b) 0

(c) 3

(d) 6

EXPLANATION

= 2! + 4! + 6! + 8!....+ 98!

= 2 + 24 + 120 + 40320 + ……. + ……0 = 6 (Ans.)

QUESTION

Q:- Number of zeros at the end of 2 x 4 x 6 x 8 …… x 100 will be

(a) 10

(b) 24

(c) 12

(d) 20

EXPLANATION

2 x 4 x 6 x 8 …… x 100

For one zero at end we need product of (5 X 2)

In this case :- all terms are even that means 2 available every place.

We count 5 :- 10,20,30,40,50,60,70,80,90,100

Total = 10 + 2 (In 50 and 100, 2 times 5 appeared)

Answer = 12

QUESTION

Q:- If N = 1! + 3! + 5! + 7!.....+99! Then remainder when N is divided by 24.

(a) 7

(b) 6

(c) 3

(d) 5

EXPLANATION

N = 1! + 3! + 5! + 7!.....+99! Then remainder when N is divided by 24.

24 = 23 X 3

N = 1 + 6 + 120 + 5040 + ……..

N = 1 + 6 = 7 (Ans.)

QUESTION

Ramesh starts working on a job and works on it for 12 days and completes 40% of the work. Then he employs Ravish and they together finish the remaining work in 12 days. The percent more efficient is Ramesh than Ravish is

(a) 200%

(b) 150%

(c) 100%

(d) 50%

EXPLANATION

40 % = 12 days

100 % = (12/40) X 100 = 30 days

Ramesh alone complete work in 30 days.

[(1/30 + 1/R) X 12] = 0.6

R = 60 Days

Efficiency α 1/ Number of days

The percent more efficient is Ramesh than Ravish is = [(1/30 – 1/60) / 1/60] X 100 = 100%

QUESTION

Q:- Rohit and Manish are running with respective speeds of 10 m/s and 15 m/s along a circular track of circumference 300 m. They started running from a common point in opposite directions, they will meet for the first time after

(a) 50 sec

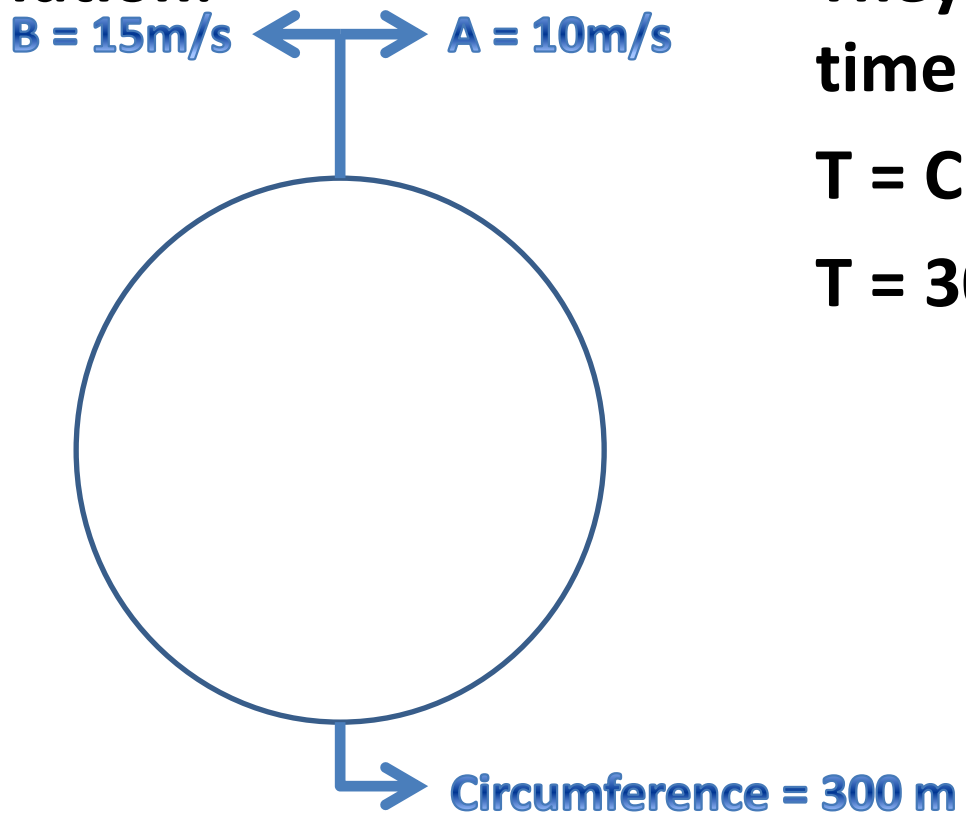
(b) 40 sec

(c) 30 sec

(d) 12 sec

EXPLANATION

Solution:-



They will meet for the first time after:-

T = Circumference/Rel.(A,B)

T = 300/(10+15) = 12 S.

QUESTION

Q:- Red light flashes 3 times per minute and Green light flashes 5 times in every two minutes. If both light start flashing at the same time, then how many times do they flash together in each 1 hour ?

(a) 30

(b) 24

(c) 20

(d) 60

EXPLANATION

Red light flashes in every = 60/3 = 20 S.

Green light flashes in every = 120/5 = 24 S.

They flash together in each 1 hour =

60 X 60 / LCM (20,24) = 3600/120 = 30 times

QUESTION

Q:- Five digit numbers are formed using only 0, 1, 2, 3, 4 without repeating. The difference between largest and smallest number that can be formed Is

(a) 39276

(b) 32976

(c) 37926

(d) 32796

EXPLANATION

Largest Number :- 43210

Smallest Number :- 10234

Difference :- 43210 – 10234 = 32976

QUESTION

Q:- If petrol becomes cheaper by 25%. The percentage by which Ashish can drive his bike more, so that his budget for petrol remains unaltered, is

(a) 22.2%

(b) 11.2%

(c) 33.3%

(d) 10.2%

EXPLANATION

100 Decreases by 25% = 75

[(100 – 75)/75] X 100 = 33.33%

QUESTION

Q:- The time between 4 and 5 o'clock, at which the hands of the clock are at right angle is

(a) 4 : 38 (2/11)

(b) 4 : 5 (5/11)

(c) both (a) and (b)

(d) neither (a) nor (b)

EXPLANATION

The hands of the clock are at right angle is:-

$$= \{[\, 5X \pm (D°/6)] \; X \; 12/11\}$$

X = 4 , D°= 90

= {[5X4 ± (90/6)] X 12/11}

= 4 : 5 (5/11)

= 4 : 38 (2/11)

THANK YOU!