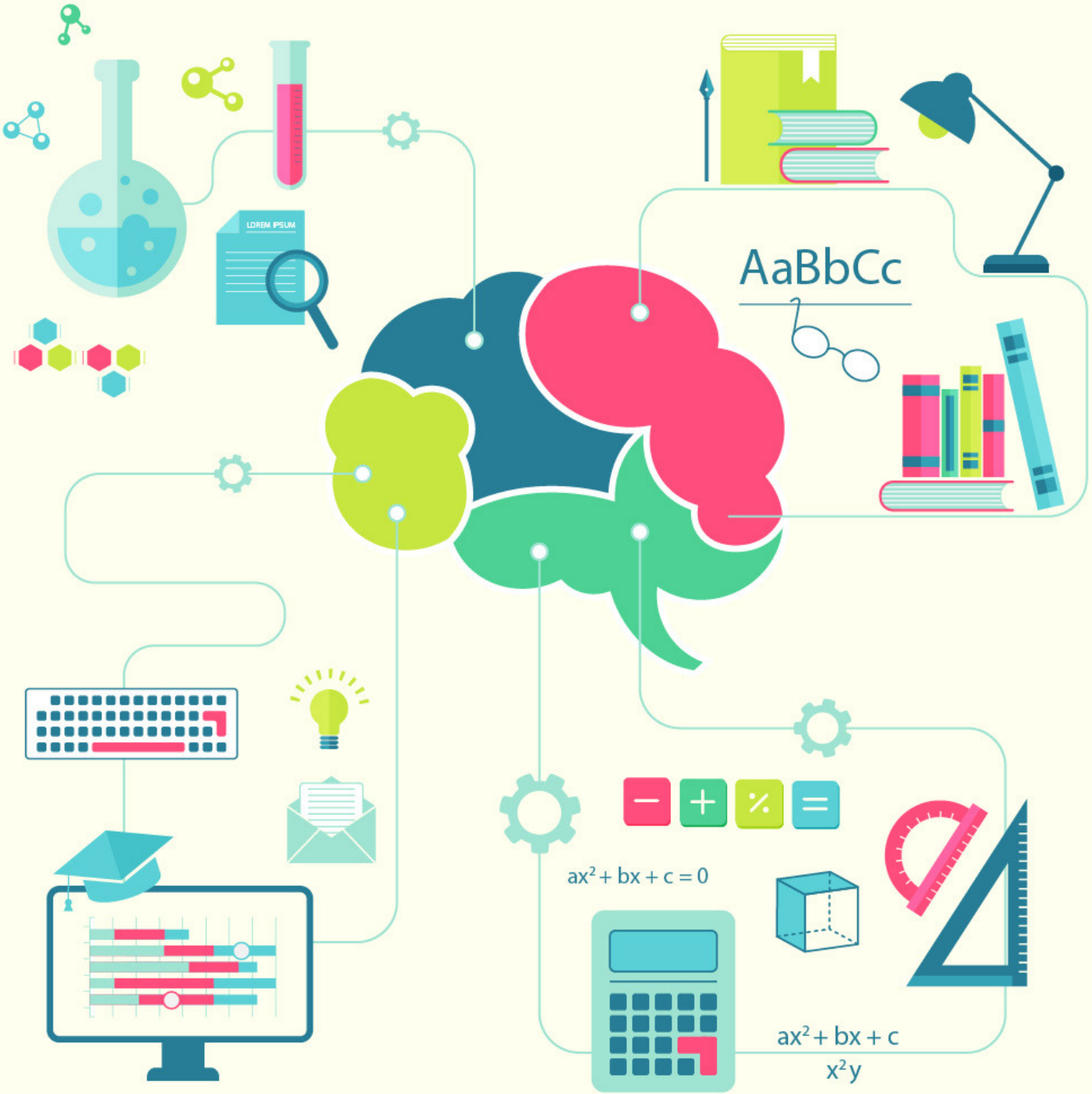
cracku

Time and Distance Questions for SSC CGL

16 April 2018



Question 1: Raj and Prem walk in opposite directions at the rate of 3 km and 2 km per hour respectively. How far will they be from each other after 2 hours ?

a) 10 km
b) 8 km
c) 6 km
d) 2 km

Question 2: A train runs at an average speed of 75 km/hr. If the distance to be covered is 1050 kms, how long will the train take to cover it ?

a) 13 hrs
b) 12 hrs
c) 15 hrs
d) 14 hrs

Question 3: A and B are 20 km apart. A can walk at an average speed of 4 km/hour and B at 6 km/ hr. If they start walking towards each other at 7 a.m., when they will meet ?

a) 8.00 a.m.
b) 8.30 a.m.
c) 9.00 a.m.
d) 10.00 a.m.

Question 4: A policeman starts to chase a thief. When the thief goes 10 steps the policeman moves 8 steps. 5 steps of the policeman is equal to 7 steps of the thief. The ratio of the speeds of the policeman and the thief is

a) 25 : 28
b) 25 : 26
c) 28 : 25
d) 56 : 25

Question 5: A tap drips at a rate of one drop/sec. 600 drops make 100m1. The number of litres wasted in 300 days is

a) 4320000
b) 432000
c) 43200
d) 4320

Question 6: A gun is fired at a distance of 1.34 km from Geeta. She hears the sound after 4 seconds. The speed at which sound travels is

a) 325 m/sec
b) 335 m/sec
c) 330 m/sec
d) 300 m/sec

Question 7: A and B together can do a piece of work in 12 days which B and C together can do in 16 days. After A has been working at it for 5 days and B for 7 days, C finishes it in 13 days. In how many days B could finish the work ?

a) 48 days
b) 24 days
c) 16 days
d) 12 days

Question 8: A policeman goes after a thief who has 100 metres start, if the policeman runs a kilometre in 8 min, and the thief a km in 10 min, the distance covered by thief before he is over-powered is

a) 350 m
b) 400 m
c) 320 m
d) 420 m

Question 9: A swimmer swims from a point A against a current for 5 minutes and then swims backwards in favour of the current for next 5 minutes and comes to the point B. If AB = 100 metres, the speed of the swimmer (in km per hour) is :

a) 0.4
b) 0.2
c) 1
d) 0.6

Question 10: Santa and Julie start walking from the same place in the opposite directions. If Julie walks at a speed of 2.5 km/hr and Santa at a speed of 2 km/hr, in how much time will they be 18 km apart ?

a) 4.0 hrs
b) 4.5 hrs
c) 5.0 hrs
d) 4.8 hrs

Answers & Solutions:

1) Answer (A)
Since Raj and Prem walks in opposite directions, their relative speed will be sum of their individual speeds i.e.
Speed, ss = 3+2 = 5 kmph
Now, distance covered in 2 hours = time * speed
= 5*2 = 10 km

2) Answer (D)
Speed of train = 75 km/h
Distance to be covered = 1050 km
=> Time taken = distance / Speed
= 1050 / 75 => 14 hours.

3) Answer (C)

Distance between A & B = 20 km
Since they are walking towards each other, their relative speed will be the sum of their individual speeds
=> relative speed = 6+4 = 10 km/h
=> Time taken to meet each other = 20 / 10 = 2 hours
=> They will meet at (7+2) = 9.00 a.m.

4) Answer (C)

5 steps of Policeman = 7 steps of a thief
=> 1 step of Policeman = 7/5 steps of thief
=> 8 Steps of Policeman = 8 x 7/5 steps of thief = 56/5 steps of thief
The ratio of speeds of policeman and thief = ratio of distance covered by policeman and thief in a same time
=> In same time policeman moves 8 steps and thief moves 10 steps
=> 56/5 : 10 (because as we calculated earlier 8 steps of policeman = 56/5 steps of thief)
=> 56 : 50 = 28 : 25

5) Answer (D)

Rate at which tap drips = 1 drop/sec
Now, no. of seconds in 1 day = 24*60*60 = 86400 sec
=> In 1 day the tap drips 86400 drops
=> 86400 / 600 ∗100 = 14400 ml = 14.4 litres
Thus, in 300 days, water wasted = 14.4*300 = 4320 litres

6) Answer (B)

speed = distance/time = 1.34km/4sec = 1340m/4sec = 335m/s.
so the answer is option B.

7) Answer (A)
Let us assume the total work to be done as 48 units.
Let the capacities of A be a, B be b and C be c.
12(a+b) = 48 => a+b = 4 ----------(1)
16 (b+c) = 48 => b+c = 3.----------(2)
5a+7b+13c = 48 (Given in the question). ----------(3)
(1) x 5 + (2) x 13 => 5a + 5b + 13b + 13c =20+39
5a+18b+13c = 59 ----------(4)
(4) - (3) => 11b = 11
b = 1
Therefore, b can complete the work in 48 days. Option A is the right answer.

8) Answer (B)
given that thief is already 100 m far from police and speed of police is 125 m/min
Speed of thief = 100 m /min
Relative speed of police= 125-100=25 m/min
Using distance = speed x time
100 = 25 × T
T= 4min
In 4 minutes ,thief can cover = 100 × 4 = 400 m

9) Answer (D)
Let the speed of the swimmer be S and current be X.
5(S-X)+ 5 (S+X)= 100
=> 10S = 100
S = 10 m/min = 600 m/hour = 0.6 kmph.
Option D is the right answer.

10) Answer (A)
here it is given that speed of Santa and Julie are 2.5km/hr and 2km/hr respectively
As it is mentioned that both are going in opposite direction then relative speed = 2.5+2 = 4.5 km/hr
Using Distance = Speed × Time
Distance = 18km
18 = 4.5 × T
T = 4 hours