TSD-PYQ FOR CSAT_QUESTIONS

1. **A person X from a place A and another person Y from a place B set out at the same time top walk towards each other. The places are separated by a distance of 15 km. X walks with a uniform speed of 1.5 km/hr and Y walks with a uniform speed of 1 km/hr in the first hour, with a uniform speed of 1.25 km/hr in the second hour and with a uniform speed of 1.5 km/hr in the third hour and so on.**
Which of the following is/are correct ?
(a) They take 5 hours to meet.
(b) They meet midway between A and B.
Select the correct answer using the code given below :
(a) Only 1
(b) Only 2
(c) Both 1 and 2
(d) Neither 1 nor 2

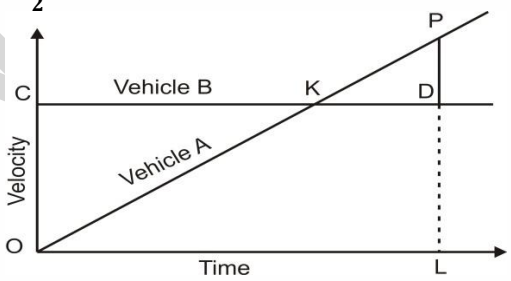
2. **A car travels from a place X to place Y at an average speed of v km/hr, from Y to X at an average speed of 2v km/hr, again from X to Y at an average speed of 3v km/hr and again from Y to X at an average speed of 4v km/hr. Then the average speed of the car for the entire journey :**
(a) is less than v km/hr
(b) lies between v and 2v km/hr
(c) lies between 2v and 3v km/hr
(d) lies between 3v and 4v km/hr

3. **A man takes half time in rowing a certain distance downstream than upstream. What is the ratio of the speed in still water to the speed of current ?**
(a) 1 : 2 (b) 2 : 1
(c) 1 : 3 (d) 3 : 1

4. **When a runner was crossing the 12 km mark, she was informed that she had completed only 80% of the race. How many kilometres was the runner supposed to run in this event ?**
(a) 14 (b) 15
(c) 16 (d) 16.5

5. **X, Y and Z are three contestants in a race of 1000 m. Assume that all run with different uniform speeds. X gives Y a start of 40 m and X gives Z a start of 64 m. If Y and Z were to compete in a race of 1000 m, how many metres start will Y give to Z ?**
(a) 20 (b) 25
(c) 30 (d) 35

6. **The figure drawn below gives the velocity graphs of two vehicles A and B. The straight line OKP represents the velocity of vehicle A at any instant, whereas the horizontal straight line CKD represents the velocity of vehicle B at any instant. In the figure, D is the point where perpendicular from P meets the horizontal line CKD such that PD = $\frac{1}{2}$ LD :**



What is the ratio between the distances covered by vehicles A and B in the time interval OL ?
(a) 1 : 2 (b) 2 : 3
(c) 3 : 4 (d) 1 : 1

7. **A train 200 metres long is moving at the rate of 40 kmph. In how many seconds will it cross a man standing near the railway line ?**
(a) 12 (b) 15
(c) 16 (d) 18

8. **Two persons, A and B are running on a circular track. At the start, B is ahead of A nd their positions make an angle of 30° at the centre of the circle. When A reaches the point diametrically opposite to his starting point, he meets B. What is the ratio of speeds of A and B, If they are running with uniform speeds ?**
(a) 6 : 5 (b) 4 : 3
(c) 6 : 1 (d) 4 : 2

9. **A freight train left Delhi for Mumbai at an average speed of 40 km/hr. Two hours later, an express train left Delhi for Mumbai, following the freight train on a parallel track at an average speed of 60 km/hr. How far from Delhi would the express train meet the freight train ?**
(a) 480 km (b) 260 km
(c) 240 km (d) 120 km

10. **Four friends A, B, C and D need to cross a bridge. A maximum of two persons can cross it at a time. It is night and they just have one lamp. Persons that cross the bridge must carry the lamp to find the way. A pair must walk together at the speed of slower person. After crossing the bridge, the person having faster speed in the pair will return with the lamp each time to accompany another person in the group. Finally, the lamp has to be returned at the original place and the person who returns the lamp has to cross the bridge again without lamp. To cross the bridge, the time taken by them is as follows: A : 1 minute, B: 2 minutes, C : 7 minutes and D : 10 minutes. What is the total minimum time required by all the friends to cross the bridge ?**
(a) 23 minutes (b) 22 minutes
(c) 21 minutes (d) 20 minutes

11. **A daily train is to be introduced between station A and station B starting from each end at 6 AM and the journey is to be completed in 42 hours. What is the number of trains needed in order to maintain the shuttle service ?**
(a) 2 (b) 3
(c) 4 (d) 7

12. **In a race, a competitor has to collect 6 apples which are kept in straight line on a track and a bucket is placed at the beginning of the track which is a starting point. The condition is that the competitor can pick only one apple at a time, run back with it and drop it in the bucket. If he has to drop all the apples in the bucket, how much total distance he has to run if the bucket is 5 meters from the first apple and all other apples are placed 3 meters apart ?**
(a) 40 m (b) 50 m
(c) 75 m (d) 150 m

13. **If A runs less fast than B, and B runs as fast but not faster than C, then, as compared to A, C runs**
(a) Slower than A
(b) Faster than A
(c) With same speed as A
(d) Given data is not sufficient to determine

14. **In a 500 metres race, B starts 45 metres ahead of A, but A wins the race while B is still 35 metres behind. What is the ratio of the speeds of A to B assuming that both start at the same time ?**
(a) 25 : 21 (b) 25 : 20
(c) 5 : 3 (d) 5 : 7

15. **Two cities A and B are 360 km apart. A car goes from A to B with a speed of 40 km/hr and returns to A with a speed of 60 km/hr. What is the average speed fo the car ?**
(a) 45 km/hr (b) 48 km/hr
(c) 50 km/hr (d) 55 km/hr