TIME,SPEED AND DISTANCE

Q. 1 In a 200 m race A beats B by 20 m. B beats C by 10 m in a 250 m race. By how many meters will A beat C in a 1 km race?
(a) 146 m (b) 164 m (c) 136 m (d) 144 m

Q.2 A boat with speed 20 m/s in still water take 1/3 hr and ½ hr in order to cover same distance downstream and upstream respectively. Then the speed of the current is:
(a) 6 m/s (b) 8 m/s (c) 3 m/s (d) 4 m/s

Q.3 Vijay goes Delhi to Bhopal at a uniform speed of 40 km/hr and comes back at a uniform speed of 60 km/hr. Then his average speed over the entire journey in km/hr.
(a) 50 (b) 52.5 (c) 48 (d) 51.5

Q.4 Ravi and Gautama are heading towards each other. If they meet at 45m from Ravi's starting point. After meeting they reachat the other's starting point in 16 hrs and 25 hrs respectively, then the initial separation between Ravi and Gautama was:
(A) 81 m (b) 100 m (c) 90 m (d) 110 m

Q.5 A, B, C are running on a circular track of 100 m circumference with speeds 10 m/s, 20 m/s 25 m/s respectively. if they started from common starting point at the same time then when they will again meet earliest at the starting point after how much time.
(a) 100 secs (b) 25 secs (c) 20 secs (d) 200 secs

Q.6 Two trains, separated by 480 kms, are approaching each other with speed 70 kmph and 50 kmph respectively. A bird with speed 100 km/hr started from the front of first train goes to front of second train and comes back to front of first and continues to and fro so on till the trains collide. What is the total distance travelled by the bird?
(a) 500 kms (b) 400 kms (c) 480 kms (d) 600 kms

Q.7 Two trains are approaching each other from opposite sides and crosses each other in 14 seconds. What is the speed of second train if speed of first train is 7 km/hr and the length of the trains is 126 m and 240 m respectively?
(a) 67.14 kmph (b) 87.11 kmph (c) 77.14 kmph (d) 97. 11 kmph

Q.8 A bus has to go a distance of 80 km in 10 hrs if it covers first half of journey in 3/5 of time, what should be its speed to cover the remaining distance in the assigned time
(a) 20 km/hr (b) 10 km/hr (c) 5 km/hr (d) 8 km/hr

Q.9 A train's average speed including stoppages in 45 km/hr while excluding stoppages it is 54 km/hr. what is the stoppage time per hour?
(a) 12 min (b) 9 min (c) 15 min (d) 10 min

Q.10 Dalbir and Asim are approaching from opposite ends of a linear race track of 100 m. After passing each other they reach end points of the track and return back. Now they meet at 35 m from where Dalbir started after 45 seconds. Find the speed of Asim.
(a) 3 m/s (b) 3.5 m/s (c) 4.5 m/s (d) 5 m/s

Q.11A boy covers a certain distance between his house and school on a cycle. Having an average speed of 15 kmph, he is late by 10 min. however with an average speed of 20 kmph. He reaches the school 5 min. earlier. Find the distance between his house and school.
(a) 15 km (b) 20 km (c) 25 km (d) 30 km

Q.12 Two trains are moving in the same direction at the speeds of 70 kmph and 90 kmph respectively. The faster train crosses a man sitting in the slower train in 36 sec. find the length of the faster train.
(a) 200 m (b) 225 m (c) 250 m (d) Can't be determined

Q.13 If A and B run at 6 km/hr and 12 km/hr on a circular track 6 km long when will they meet for the first time if they are running in opposite direction
(a) 20 min (b) 28 min (c) 29 min (d) 10 min

Q.14 A and B run around a circular track of length 600 m at the respective speeds of 15 m/sec and 20 m/sec starting from the same point and at the same time travelling in the same direction. When will they meet each other at the starting point for the first time?
(a) 2 min (b) 4 min (c) 6 min (d) 7 min

Q.15 A car travels a distance 840 km at a uniform speed if the speed of the car is 10 km/hr more it takes 2 hours less to cover the same distance then the original speed of the car was
(a) 80 km/hr (b) 70 km/hr (c) 60 km/hr (d) 40 km/hr

Q.16 A tourist covers half of this journey by train at 60 km/hr, half of the remainder by bus at 30 km/hr and the rest by cycle at 10 km/hr. the average speed of the tourist in km/hr during his entire journey is
(a) 36 (b) 30 (c) 24 (d) 18

Q.17 A cars travels 8 km in the first quarter of an hour, 6 km in the second quarter and 16 km in the third quarter. The average speed of the car in km per hour the entire journey is
(a) 30 (b) 36 (c) 40 (d) 24

Q.18 We are driving along a highway at a constant speed of 55 miles per hour (mph). You observe a car one half mile behind you. The car is moving fast and zooms past you exactly one minute later. How fast is this car traveling (mph) if its speed is constant?
(a) 80 km/hr (b) 70 km/hr (c) 72 km/hr (d) 85 km/hr

Q.19 Two cars start at the same time from the same location and go in the same direction.The speed of the first car is 50 km/h and the speed of the second car is 60 km/h. Thenumber of hours it takes for the distance between the two cars to be 20 km is _____.
(a) 1 (b) 2 (c) 3 (d) 6

Q.20 Two trains started at 7 AM from the same point. The first train travelled north at a speed of 80 km/h and the second train travelled south at a speed of 100 km/h. The time at which they were 540 km apart is _____AM.
(a) 9 (b) 10 (c) 11 (d) 11.30

Q.21 Mohan beats Satish by 20 m in a 200 m race. To do a favour to Satish, in a second similar race Mohan started from 20 m behind the start line, though Satish started from start point. Then
(a) They reached simultaneously (b) Satish beats Mohan by 20 m
(c) Mohan beats Satish by 2 m (d) Satish beats Mohan by 2 m

Q.22 An automobile travels from city A to city B and returns to city A by the same route. The speed of the vehicle during the onward & return journeys were constant at 60 km/hr and 90 km/hr respectively. What is the average speed in km /hr for the entire journey?
(a) 72 (b) 73 (c) 74 (d)75

Q.23 It takes 10 s and 15 s , respectively, for two trains travelling at different constant speeds to completely pass a telegraph post.The length of the first train is 120m and that of the second train is 150 m. The magnitude of the difference in the speeds of the two trains (in m/s) is –
(a) 2 (b)10 (c)12 (d) 22

Q.24 A train that is 280 meters long, travelling at a uniform speed, crosses a platform in 60 seconds and passes a man standing on the platform in 20 seconds. What is the length of the platform in 20 seconds? What is the length of the platform in meters?
(a) 280 (b) 420 (c) 700 (d) 560

Q.25 From the time the front of a trains enters a platform, it takes 25 sec for the back of the train to leave the platform, while train travelling at a constant speed of 54 km/hr. At the same speed, it takes 14 sec to pass a man running at 9 km/hr in the same direction as the train.What is the length of the train and that of the platform in meters respectively?
(a)210 & 140 (b)162.5 & 187.5
(c)245 & 130 (d)175 & 200

Q.26 A tiger is 50 leaps of its own behind a deer. The tiger takes 5 leaps per minute to the deer's 4. If the tiger and the deer cover 8 meter and 5 meter per leap respectively. After how much distance (in meters) will the tiger have to run before it catches the deer?
(a) 600 (b) 800 (c) 640 (d) 720

DIRECTIONS (27-30): Read the data given below –
Two trains start from the opposite stations A and B which are 100 m apart, at the same time. A bird flies from the faster train towards the slower one starting at the same time. The velocities of the two trains and the bird are in G.P. the bird being the fastest. The bird reaches the second train in 10 sec and then immediately flies back towards the front of faster train. It continues to do so till the two trains meet after 50/3 sec.

Q.27 What is the velocity of the slower train?
(a) 1m/s (b) 2m/s (c) 3 m/s (d) 4 m/s

Q.28 After how many seconds from where the bird first started flying does the bird again reach the faster train?
(a) 20/3 sec (b) 10 sec (c) 40/3 sec (d) 50/3 sec

Q.29 What is the velocity of the bird?
(a)6 m/s (b)7 m/s (c) 8m/s (d) 9 m/s

Q.30 What will be the total distance travelled by the bird till the two trains meet?
(a)200/3 m (b)100m (c)400/3 m (d)500/3 m

Q.31 When travelling with 60km/hr, Ravi reached office 2 hrs before the scheduled time & while travelling with 40 km/hr he reached office late 2 hrs after the scheduled time. At what speed he should travel so that he reaches office at scheduled time?

(a) 50 Km/hr (b) 45 km/hr (c) 55 km/hr (d) 48 km/hr