Practice Exercise

Level - I

1. A certain distance is covered by a train with a certain speed. If half the distance is covered in double time, then the ratio of this speed to that of the original one is
(a) 1 : 4 (b) 4 : 1
(c) 1 : 2 (d) 2 : 1

2. A man makes his upward journey at 16 km/h and downward journey at 28 km/h. What is his average speed ?
(a) 32 km/h (b) 56 km/h
(c) 20.36 km/h (d) 22 km/h

3. Sound is said to travel in air at about 1100 feet per second. A man hears the axe striking the tree, $\frac{11}{5}$ seconds after he sees it strike the tree. How far is the man from the wood chopper?
(a) 2197 ft (b) 2420 ft
(c) 2500 ft (d) 2629 ft

4. A salesman travels a distance of 50 km in 2 hours and 30 minutes. How much faster, in kilometres per hour, on an average, must he travel to make such a trip in $\frac{5}{6}$ hour less time?
(a) 10 (b) 20
(c) 30 (d) None of these

5. Two persons *A* and *B* started from two different places towards each other. If the ratio of their speed be 3 : 5, then what is the ratio of distance covered by *A* and *B* respectively till the point of meeting?
(a) 1 : 2 (b) 3 : 4
(c) 3 : 5 (d) 5 : 3

6. If a man travels at 30 km/h, he reaches his destination late by 10 minutes but if he travels at 42 km/h then he reaches 10 minutes earlier. The distance travelled by him is
(a) 30 km (b) 35 km
(c) 45 km (d) 36 km

7. Two trains each of 120 m in length, run in opposite directions with a velocity of 40 m/s and 20 m/s respectively. How long will it take for the tail ends of the two trains to meet each other during the course of their journey?
(a) 20 s (b) 3 s
(c) 4 s (d) 5 s

8. Two trains starting at the same time from two stations, 200 km apart and going in opposite directions, cross each other at a distance of 110 km from one of them. What is the ratio of their speeds?
(a) 11 : 20 (b) 9 : 20
(c) 11 : 9 (d) 19 : 20

9. Two runner start running together for a certain distance, one at 8 km/h and another at 5 km/h. The former arrives one and half an hour, before the latter. The distance (in km) is:
(a) 12 (b) 20
(c) 25 (d) 36

10. A can complete a journey in 10 hours. He travels first half of the journey at the rate of 21 km/hr and second half at the rate of 24 km/hr. Find the total journey in km.
(a) 220 km (b) 224 km
(c) 230 km (d) 234 km

11. A train is moving at a speed of 132 km/h. If the length of the train is 110 metres, how long will it take to cross a railway platform, 165 metres long ?
(a) 5 s (b) 7.5 s
(c) 10 s (d) 15 s

12. A person travels equal distances with speeds of 3km/hr, 4 km/hr and 5km/hr and takes a total time of 47 minutes. The total distance (in km) is:
(a) 2 (b) 3
(c) 4 (d) 5

13. *A* and *B* travel the same distance at 9 km/h and 10 km/h respectively. If *A* takes 20 minutes longer than *B*, the distance travelled by each is:
(a) 16 (b) 20
(c) 30 (d) None of these

14. A passenger train takes two hours less for a journey of 300 km if its speed is increased by 5 km/h from its normal speed. The normal speed of the train is
(a) 35 km/h (b) 50 km/h
(c) 25 km/h (d) 30 km/h

15. A gun is fired at a distance of 3.32 km from Chauhan. He hears its sound 10 seconds later. Find the speed of the sound.
(a) 301 m/s (b) 302 m/s
(c) 332 m/s (d) 340 m/s

16. A walks around a circular field at the rate of one round per hour while B runs around it at the rate of six rounds per hour. They start in the same direction from the same point at 7.30 a.m. They shall first cross each other at:
(a) 7.42 a.m. (b) 7.48 a.m.
(c) 8.10 a.m. (d) 8.30 a.m.

17. A car driver travels from the plains to a hill station, which are 200 km apart at an average speed of 40 km/h. In the return trip he covers the same distance at an average speed of 20 km/h. The average speed of the car over the entire distance of 400 km is
(a) 16.56 km/h (b) 17.89 km/h
(c) 26.67 km/h (d) 35 km/h

18. Two trains of equal lengths are running on parallel tracks in the same direction at 46 km/h and 36 km/h, respectively. The faster train passes the slower train in 36 sec. The length of each train is

(a) 50 m (b) 80 m
(c) 72 m (d) 82 m

19. In a 800 m race around a stadium having the circumference of 200 m, the top runner meets the last runner on the 5th minute of the race. If the top runner runs at twice the speed of the last runner, what is the time taken by the top runner to finish the race ?

(a) 20 min (b) 15 min
(c) 10 min (d) 5 min

20. Excluding stoppages, the speed of a train is 45 km/h and including stoppages, it is 36 km/h. For how many minutes does the train stop per hour ?

(a) 10 min. (b) 12 min.
(c) 15 min. (d) 18 min.

21. The driving wheel of a locomotive engine, 2.1 m in radius, makes 75 revolutions in one minute. Find the speed of the train in km/h.

(a) 60 km/h (b) 59.4 km/h
(c) 61.5 km/h (d) None of these

22. A train covers 180 km distance in 4 hours. Another train covers the same distance in 1 hour less. What is the difference in the distances covered by these trains in one hour ?

(a) 45 km (b) 9 km
(c) 40 km (d) None of these

23. Speed of a speed-boat when moving in the direction parallel to the direction of the current is 16 km/hr. Speed of the current is 3 km/hr. So the speed of the boat against the current will be (in km/hr)

(a) 22 (b) 9.5
(c) 10 (d) None of these

24. A plane left 30 minutes later than the scheduled time and in order to reach the destination 1500 km away in time, it had to increase the speed by 250 km/h from the usual speed. Find its usual speed.

(a) 720 km/h (b) 740 km/h
(c) 730 km/h (d) 750 km/h

25. Two trains are 2 km apart and their lengths are 200 m and 300 m. They are approaching towards each other with a speed of 20 m/s and 30 m/s, respectively. After how much time will they cross each other?

(a) 50 s (b) 100 s
(c) 25/3 s (d) 150 s

26. A train 300 m long is running at a speed of 90 km/hr. How many seconds will it take to cross a 200 m long train running in the opposite direction at a speed of 60 km/hr?

(a) $7\frac{1}{5}$ (b) 60
(c) 12 (d) 20

27. A boat travels upstream from B to A and downsteam from A to B in 3 hours. If the speed of the boat in still water is 9 km/hr and the speed of the current is 3 km/hr, the distance between A and B is

(a) 4 km (b) 8 km
(c) 6 km (d) 12 km

28. A motor boat can travel at 10 km/h in still water. It traveled 91 km downstream in a river and then returned, taking altogether 20 hours. Find the rate of flow of the river.

(a) 6 km/hr (b) 5 km/hr
(c) 8 km/hr (d) 3 km/hr

29. Two men starting from the same place walk at the rate of 5 km/h and 5.5 km/h respectively. What time will they take to be 8.5 km apart, if they walk in the same direction?

(a) 16 h (b) 8 h 30 min
(c) 4h / 5min (d) 17 h

30. Speed of a boat in standing water is 9 km/h and the speed of the stream is 1.5 kmIh. A man rows to a place at a distance of 105 km and comes back to the starting point. The total time taken by him is

(a) 20 h (b) 18 h
(c) 16 h (d) 24 h

31. An aeroplane travels distances 2500 km, 1200km and 500km at the rate of 500 km/hr, 400 km/hr, and 250 km/hr, respectively. The average speed is

(a) 420 km/hr (b) 405 km/hr
(c) 410 km/hr (d) 575 km/hr

32. There are 20 poles with a constant distance between each pole. A car takes 24 seconds to reach the 12th pole . How much time will it take to reach the last pole?

(a) 25.25 s (b) 17.45 s
(c) 35.75 s (d) 41.45 s

33. A man walks half of the journey at 4 km/h by cycle does one third of journey at 12 km/h and rides the remainder journey in a horse cart at 9 km/h, thus completing the whole journey in 6 hours and 12 minutes. The length of the journey is

(a) 36 km (b) $\frac{1332}{67}$ km
(c) 40 km (d) 28 km

34. A train covers 180 km distance in 4 hours. Another train covers the same distance in 1 hour less. What is the difference in the distances covered by these trains in one hour ?

(a) 45 km (b) 9 km
(c) 40 km (d) None of these

35. The jogging track in a sports complex is 726 metres in circumference. Pradeep and his wife start from the same point and walk in opposite directions at 4.5 km/h and 3.75 km/h, respectively. They will meet for the first time in

(a) 5.5 min (b) 6.0 min
(c) 5.28 min (d) 4.9 min

36. A boat goes 24 km upstream and 28 km downstream in 6 hours. It goes 30km upstream and 21 km downstream in 6 hours and 30 minutes. The speed of the boat in still water is :

(a) 10 km/h (b) 4 km/h
(c) 14 km/h (d) 6km/h

37. Two trains for Mumbai leave Delhi at 6 a.m. and 6 : 45 am and travel at 100 kmph and 136 kmph respectively. How many kilometres from Delhi will the two trains be together
(a) 262.4 km (b) 260 km
(c) 283.33 km (d) 275 km

38. A 200 m-long train passes a 350 m long platform in 5 s. If a man is walking at a speed of 4 m/s along the track and the train is 100 m away from him, how much time will it take to reach the man?
(a) Less than 1 s (b) 1.04 s
(c) More than 2s (d) Data insufficient

39. A clock gains 15 minutes per day. It is set right at 12 noon. What time will it show at 4.00 am, the next day?
(a) 4 : 10 am (b) 4 : 45 am
(c) 4 : 20 am (d) 5 : 00 am

40. During a journey of 80 km a train covers first 60km with a speed of 40 km/h and completes the remaining distance with a speed of 20 km/h. What is the average speed of the train during the whole journey?
(a) 30 km/h (b) 32 km/h
(c) 36 km/h (d) 40 km/h

41. *A* travels from *B* to *C*, a distance of 250 miles, in 5.5 hours. He returns to *B* in 4 hours 40 minutes. His average speed is
(a) 44 (b) 46
(c) 48 (d) 50

42. A circular running path is 726 metres in circumference. Two men start from the same point and walk in opposite directions at 3.75 km/h and 4.5 km/h, respectively. When will they meet for the first time ?
(a) After 5.5 min (b) After 6.0 min
(c) After 5.28 min (d) After 4.9 min

43. *R* and *S* start walking each other at 10 AM at the speeds of 3 km/hr and 4 km/hr respectively. They were initially 17.5 km apart. At what time do they meet?
(a) 2 : 30 PM (b) 11 : 30 AM
(c) 1 : 30 PM (d) 12 : 30 PM

44. A person travels from *P* to *Q* at a speed of 40 kmph and returns by increasing his speed by 50%. What is his average speed for both the trips?
(a) 36 kmph (b) 45 kmph
(c) 48 kmph (d) 50 kmph

45. A car travels first half distance between two places with a speed of 40 km/h and the rest of the half distance with a speed of 60 km/h. The average speed of the car is
(a) 48 km/h (b) 37 km/h
(c) 44 km/h (d) None of these

46. Two cyclists start on a circular track from a given point but in opposite directions with speeds of 7 m/sec and 8 m/sec respectively. If the circumference of the circle is 300 metres, after what time will they meet at the starting point ?
(a) 100 sec (b) 20 sec
(c) 300 sec (d) 200 sec

47. If a train runs at 40 kmph, it reaches its destination late by 11 minutes but if it runs at 50 kmph, it is late by 5 minutes only. The correct time for the train to complete its journey is:
(a) 13 min. (b) 15 min.
(c) 19 min. (d) 21 min.

48. A man while returning from his factory, travels 2/3 of the distance by bus and $\frac{3}{4}$ of the rest by car, and the remaining by foot. If he travels 2 km on foot, find the distance covered by him.
(a) 24 km (b) 22 km
(c) 28 km (d) 26 km

49. A car driver, driving in a fog, passes a pedestrian who was walking at the rate of 2 km/hr in the same direction. The pedestrian could see the car for 6 minutes and it was visible to him up to a distance of 0.6 km. What was the speed of the car?
(a) 15 km/hr (b) 30 km/hr
(c) 20 km/hr (d) 8 km/hr

50. A plane left 30 min later than its scheduled time to reach its destination 1500 km away. In order to reach in time it increases its speed by 250 km/h. What is its original speed?
(a) 1000 km/h (b) 750 km/h
(c) 600 km/h (d) 800 km/h

51. Bombay Express left Delhi for Bombay at 14.30 hrs, travelling at a speed of 60 kmph and Rajdhani Express left Delhi for Bombay on the same day at 16.30 hrs, travelling at a speed of 80 kmph. How far away from Delhi will the two trains meet?
(a) 120 km (b) 360 km
(c) 480 km (d) 500 km

52. A person can swim at a speed of 9 km per hour in still water. If the speed of the stream is 6 km per hour, then how long does he take to swim up to a distance of 9 km and return at the starting point?
(a) 2 hours (b) $2\frac{1}{2}$ hours
(c) $3\frac{3}{5}$ hours (d) $3\frac{3}{4}$ hours

53. A thief goes away with a Maruti car at a speed of 40 km/h. The theft has been discovered after half an hour and the owner sets off in another car at 50 km/h. When will the owner overtake the thief from the start.
(a) $2\frac{1}{2}$ hours (b) 2 hr 20 min
(c) 1 hr 45 min (d) cannot be determined

54. A man is walking at a speed of 10 km per hour. After every kilometre, he takes rest for 5 minutes. How much time will he take to cover a distance of 5 kilometres?
(a) 48 min. (b) 50 min.
(c) 45 min. (d) 55 min.

55. One-fourth of a certain journey is covered at the rate of 25 km/h, one-third at the rate of 30 km/h and the rest at 50 km/h. Find the average speed for the whole journey.
(a) 600/53 km/h (b) 1200/53 km/h
(c) 1800/53 km/h (d) 1600/53 km/h

56. A railway passenger counts the telegraph poles on the rail road as he passes them. The telegraph poles are at a distance of 50 meters. What will be his count in 4 hours if the speed of the train is 45 km per hour?
(a) 2500 (b) 600
(c) 3600 (d) 5000

57. A long distance runner runs 9 laps of a 400 metres track everyday. His timings (in minutes) for four consecutive days are 88, 96, 89 and 87 resplectively. On an average, how many metres/minute does the runner cover ?
(a) 40 m/min (b) 45 m/min
(c) 38 m/min (d) 49 m/min

58. A dog starts chasing to a cat 2 hours later. It takes 2 hours to dog to catch the cat. If the speed of the dog is 30 km/h, what is the speed of cat?
(a) 10 km/h (b) 15 km/h
(c) 20 km/h (d) Can't be determined

59. A truck covers a distance of 368 km at a certain speed in 8 hours. How much time would a car take at an average speed which is 18 km/hr more than that of the speed of the truck to cover a distance which is 16 km more than that travelled by the truck ? [*SBI Clerk-2012*]
(a) 7 hrs (b) 5 hrs
(c) 6 hrs (d) 8 hrs
(e) None of these

60. An aeroplane takes off 30 minutes later than the scheduled time and in order to reach its destination 1500 km away in time, it has to increase its speed by 250 km/h from its usual speed. Find its usual speed. [*SBI Clerk-2014*]
(a) 1000 km/h (b) 750 km/h
(c) 850 km/h (d) 650 km/h
(e) None of these

61. A man walks a certain distance and rides back taking a total time of 37 minutes. He could walk both ways in 55 minutes. How long would he take to ride both ways? [*SSC-Sub. Ins.-2012*]
(a) 9.5 minutes (b) 18 minutes
(c) 19 minutes (d) 20 minutes

62. On a journey across Kolkata, a taxi averages 50 km per hour for 50% of the distance. 40 km per hour for 40% of it and 20 km per hour for the remaining. The average speed in km/hour, for the whole journey is :[*SSC-Sub. Ins.-2013*]
(a) 42 (b) 40
(c) 35 (d) 45

63. A train 270 metre long is running at a speed of 36 km per hour, then it will cross a bridge of length 180 metres in : [*SSC-Sub. Ins.-2013*]
(a) 40 sec (b) 45 sec
(c) 50 sec (d) 35 sec

64. A student goes to school at the rate of $\frac{5}{2}$ km/hr and reaches 6 minutes late. If he travels at the speed of 3 km/hr, he reaches 10 minutes earlier. The distance of the school is [*SSC-Sub. Ins.-2014*]
(a) 45 km (b) 20 km
(c) 10 km (d) 4 km

65. A train 50 metre long passes a platform 100 metre long in 10 sec. The speed of the train in km/hr is [*SSC-Sub. Ins.-2014*]
(a) 10 (b) 54
(c) 15 (d) 100

66. Walking at a speed of 5 km/hr, a man reaches his office 6 minutes late. Walking at 6 km/hr, he reaches there 2 minutes early. The distance of his office is [*SSC-MT-2013*]
(a) 2 km (b) 3 km
(c) 4 km (d) 3.5 km

67. Two trains 108 m and 112 m in length are running towards each other on the parallel lines at a speed of 45 km/hr and 54 km/hr respectively. To cross each other after they meet, it will take [*SSC-MT-2013*]
(a) 10 sec (b) 12 sec
(c) 9 sec (d) 8 sec

68. A train 100 metres long meets a man going in opposite Directions at 5 km/hr and passes him in $7\frac{1}{5}$ seconds. What is the speed of the train in km/hr ? [*SSC 10+2-2012*]
(a) 45 km/hr (b) 60 km/hr
(c) 55 km/hr (d) 50 km/hr

69. A train is moving at a speed of 80 km/h and covers a certain distance in 4.5 hours. The speed of the train to cover the same distance in 4 hours is [*SSC 10+2-2013*]
(a) 90 km/h (b) 100 km/h
(c) 70 km/h (d) 85 km/h

70. A horse take 2½ seconds to complete a round around a circular field. If the speed of the horse was 66 m/sec, then the radius of the field is, [*SSC 10+2-2014*]
[Given $\pi = \frac{22}{7}$]
(a) 25.62 m (b) 26.52 m
(c) 25.26 m (d) 26.25 m

71. The area of a square park is 25 sq. km. The time taken to complete a round of the field once, at a speed of 3 km/hour is [*SSC 10+2-2014*]
(a) 4 hours 60 minutes (b) 4 hours 50 minutes
(c) 6 hours 40 minutes (d) 5 hours 40 minutes

72. The speed of a man is $\frac{3}{4}$th the speed of a bicycle. The bicycle covers 192 m in 8 seconds. How much time will the man take to cover 54 m ? [*IBPS Clerk-2012*]
(a) 3 seconds (b) 4 seconds
(c) 7 seconds (d) 5 seconds
(e) None of these

73. A bus covers 572 kms in 13 hours. What is the speed of the bus? [*IBPS Clerk-2012*]
(a) 40 km/hr (b) 44 km/hr
(c) 43 km/hr (d) 47 km/hr
(e) None of these

74. A 210 m long train takes 6 s to cross a man running at 9 km/h in a direction opposite to that of the train. What is the speed of the train? (in km/h) [*IBPS Clerk-2013*]
(a) 127 (b) 121
(c) 117 (d) 108
(e) 111

Level - II

1. A and B can run 200 m in 22 seconds and 25 seconds, respectively. How far is B from the finishing line when A reaches in ?

(a) 8 m (b) 12 m
(c) 16 m (d) 24 m

2. If a man walks at the rate of 5 kmph, he misses a train by 7 minutes. However, if he walks at the rate of 6 kmph, he reaches the station 5 minutes before the arrival of the train. Find the distance covered by him to reach the station.

(a) 4 km (b) 6 km
(c) 5 km (d) 7 km

3. The speed of a car increases by 2 kms after every one hour. If the distance travelled in the first one hour was 35 kms, what was the total distance travelled in 12 hours?

(a) 456 kms (b) 482 kms
(c) 552 kms (d) None of these

4. It takes eight hours for a 600 km journey, if 120 km is done by train and the rest by car. It takes 20 minutes more, if 200 km is done by train and the rest by car. The ratio of the speed of the train to that of the speed of the car is

(a) 4 : 3 (b) 3 : 4
(c) 3 : 2 (d) 2 : 3

5. A person has to cover a distance of 6 km in 45 minutes, If he covers one-half of the distance in two-thirds of the total time; to cover the remaining distance in the remaining time, his speed (in km/hr) must be:

(a) 6 (b) 8
(c) 12 (d) 15

6. A car travels the first one-third of a certain distance with a speed of 10 km/hr, the next one-third distance with a speed of 20 km/hr, and the last one-third distance with a speed of 60 km/hr. The average speed of the car for the whole journey is

(a) 18 km/hr (b) 24 km/hr
(c) 30 km/hr (d) 36 km/hr

7. A train starts from Delhi at 6 : 00 AM and reaches Ambala Cantt at 10 AM. The other train starts from Ambala Cantt at 8 AM and reaches Delhi at 11:30 PM. If the distance between Delhi and Ambala Cantt. is 200 km, then at what time did the two trains meet each other ?

(a) 8 : 56 AM (b) 8 : 46 AM
(c) 7 : 56 AM (d) 8 : 30 AM

8. Rahul can row a certain distance downstream in 6 hours and return the same distance in 9 hours. If the speed of Rahul in still water is 12 km/hr, find the speed of the stream.

(a) 2 km/hr (b) 2.4 km/hr
(c) 3 km/hr (d) Data inadequate

9. A man can row 4.5 km/hr in still water and he finds that it takes him twice as long to row up as to row down the river. Find the rate of the stream.

(a) 1.5 km/hr (b) 2 km/hr
(c) 2.5 km/hr (d) 1.75 km/hr

10. A man sitting in a train travelling at the rate of 50 km/hr observes that it takes 9 sec for a goods train travelling in the opposite direction to pass him. If the goods train is 187.5 m long, find its speed.

(a) 40 km/hr (b) 25 km/hr
(c) 35 km/hr (d) 36 km/hr

11. Two trains are moving in opposite directions at speeds of 60 km/hour and 90 km/hour. Their lengths are 1.10 km and 0.9 km respectively. The time taken by the slower train to cross the faster train in seconds is

(a) 36 (b) 49
(c) 45 (d) 48

12. It takes eight hours for a 600 km journey, if 120 km is done by tain and the rest by car. It takes 20 minutes more, if 200 km is done by train and the rest by car. The ratio of the speed of the train to that of the car is

(a) 2 : 3 (b) 3 : 2
(c) 3 : 4 (d) 4 : 3

13. The distance between two cities A and B is 330 km. A train starts from A at 8 a.m. and travels towards B at 60 km/hr. Another train starts from B at 9 a.m. and travels towards A at 75 km/hr. At what time do they meet?

(a) 10 a.m. (b) 10.30 a.m.
(c) 11 a.m. (d) 11.30 a.m.

14. A motorcyclist covered two thirds of a total journey at his usual speed. He covered the remaining distance at three fourth of his usual speed. As a result, he arrived 30 minutes later than the time he would have taken at usual speed. If the total journey was 180 km, the what is his usual speed?

(a) 40 kmph (b) 36 kmph
(c) 30 kmph (d) 32 kmph

15. A man can row a certain distance against the stream in 6 hours. However, he would take two hours less to cover the same distance with the current. If the speed of the current is 2 kmph, then what is the rowing speed in still water?

(a) 10 kmph (b) 12 kmph
(c) 14 kmph (d) 8 kmph

16. If I walk at 4 km/h, I miss the bus by 10 minutes. If I walk at 5 km/h, I reach 5 minutes before the arrival of the bus. How far I walk to reach the bus stand ?

(a) 5 km (b) 4.5 km
(c) $5\frac{1}{4}$ km / h (d) Cannot be determined

17. A man covers a certain distance on a toy train. If the train moved 4 km/h faster, it would take 30 minutes less. If it moved 2 km/h slower, it would have taken 20 minutes more. Find the distance.

(a) 60 km (b) 58 km
(c) 55 km (d) 50 km

18. An aeroplane flies along the four sides of a square at the speeds of 200, 400, 600 and 800 km/h. Find the average speed of the plane around the field.

(a) 384 km/h (b) 370 km/h
(c) 368 km/h (d) None of these

19. A thief steals a car at 2 : 30 p.m. and drives it at 60 kmph. The theft is discovered at 3 p.m. and the owner sets off in another car at 75 kmph. When will he overtake the thief?

(a) 4 : 30 p.m. (b) 4 : 45 p.m.
(c) 5 p.m. (d) 5 : 15 p.m.

20. Points A and B are 70 km apart on a highway. One car starts form A and the another one from B at the same time. If they travel in the same direction, they meet in 7 hours. But if they travel towards each other, they meet in one hour. The speeds of the two cars are, respectively.

(a) 45 and 25 km/h (b) 70 and 10 km/h
(c) 40 and 30 km/h (d) 60 and 40 km/h

21. A river 3 m deep and 40 m wide is flowing at the rate of 2 km per hour. How much water (in litres) will fall into the sea in a minute?

(a) 4,00,000 (b) 40,00,000
(c) 40,000 (d) 4,000

22. A dog sees a cat. It estimates that the cat is 25 leaps away. The cat sees the dog and starts running with the dog in hot pursuit. If in every minute, the dog makes 5 leaps and the cat makes 6 leaps and one leap of the dog is equal to 2 leaps of the cat. Find the time in which the cat is caught by the dog (assume an open field with no trees)

(a) 12 minutes (b) 15 minutes
(c) 12.5 minutes (d) None of these

23. A group of soldiers are marching with a speed of 5 m/s. The distance between the first and the last row of soldiers is 100 m. A dog starts running from the last row and moves towards the first row, turns and comes back to the last row. If the dog has travelled 400 m, the speed of the dog is

(a) $5\sqrt{2}$ m/s (b) $3\sqrt{5}$ m/s
(c) $6\sqrt{5}$ m/s (d) $6\sqrt{2}$ m/s

24. Ram runs 7/4 times as fast as Sham, If Ram gives Sham a start of 300 m, how far must the winning post be if both Ram and Sham have to end the race at the same time?

(a) 1400 m (b) 700 m
(c) 350 m (d) 210 m

25. A watch, which gains time uniformly, was 5 minutes behind the correct time when it showed 11:55 AM on Monday. It was 10 minutes ahead of the correct time when it showed 06:10 PM on the next day. When did the watch show the correct time?

(a) 6 AM, Tuesday (b) 6 PM, Monday
(c) 2 PM, Tuesday (d) 10 PM, Monday

26. With an average speed of 40 km/h, a train reaches its destination in time. If it goes with an average speed of 35 km/h, it is late by 15 minutes. The length of the total journey is:

(a) 40 km (b) 70 km
(c) 30 km (d) 80 km

27. A student rides on a bicycle at 8 km/h and reaches his school 2.5 minutes late. The next day he increases his speed to 10 km/h and reaches the school 5 minutes early. How far is the school from his house?

(a) 1.25 km (b) 8 km
(c) 5 km (d) 10 km

28. Two rockets approach each other, one at 42000 mph and the other at 18000 mph. They start 3256 miles apart. How far are they apart (in miles) 1 minute before impact ?

(a) 1628 (b) 1000
(c) 826 (d) 1200

29. Two guns were fired form the same place at an interval of 10 minutes and 30 seconds, but a person in the train approaching the place hears the second shot 10 minutes after the first. The speed of the train (in km/hr), supposing that speed travels at 330 metres per second, is

(a) 19.8 (b) 58.6
(c) 59.4 (d) 111.80

30. Train A running at 60 km/h leaves Mumbai for Delhi at 6 p.m. Train B running at 90 km/h also leaves for Delhi at 9 p.m. Train C leaves Delhi for Mumbai at 9 p.m. If all the three trains meet at the same time between Mumbai and Delhi, then what is the speed of train C, if distance between Delhi and Mumbai is 1260 km ?

(a) 60 km/h (b) 90 km/h
(c) 120 km/h (d) 135 km/h

31. A boat, while going downstream in a river covered a distance of 50 mile at an average speed of 60 miles per hour. While returning, because of the water resistance, it took one hour fifteen minutes to cover the same distance . What was the average speed of the boat during the whole journey?

(a) 40 mph (b) 48 mph
(c) 50 mph (d) 55 mph

32. A man takes 5 hour 45 min. in walking to a certian place and riding back. He would have gained 2 hours by riding both ways. The time he would take to walk both ways, is

(a) 3 hrs 45 min (b) 7 hrs 30 min
(c) 7 hrs 45 min (d) 11 hrs 45 min

33. A boatman rows to a place 45 km distant and back in 20 hours. He finds that he can row 12 km with the stream in same time as 4 km against the stream . Find the speed of the stream.
(a) 3 km/hr (b) 2.5 km/hr
(c) 4 km/hr (d) Cannot be determined

34. A man goes 15 metres due west and then 8 metres due north. How far is he from the starting point?
(a) 19 metres (b) 16 metres
(c) 17 metres (d) 15 metres

35. Two trains, 130 m and 110 m long, are going in the same direction. The faster train takes one minute to pass the other completely. If they are moving in opposite directions, they pass each other completely in 3 seconds. Find the speed of each train.
(a) 38 m/sec, 36 m/sec (b) 42 m/sec, 38 m/sec
(c) 36 m/sec, 42 m/sec (d) None of these

36. A man who can swim 48 m/min in still water swims 200 m against the current and 200 m with the current. If the difference between those two times is 10 minutes, find the speed of the current.
(a) 30 m/min (b) 29 m/min
(c) 31 m/min (d) 32 m/min

37. A man who can swim 48 m/min in still water swims 200 m against the current and 200 m with the current. If the difference between those two times is 10 min, what is the speed of the current?
(a) 30 m/min (b) 31 m/min
(c) 29 m/min (d) 32 m/min

38. A man walks a certain distance and rides back in $6\frac{1}{4}$h. He can walk both ways in $7\frac{3}{4}$h. How long it would take to ride both ways ?
(a) 5 hours (b) $4\frac{1}{2}$hours
(c) $4\frac{3}{4}$hours (d) 6 hours

39. An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?
(a) 144° (b) 150°
(c) 168° (d) 180°

40. A dog after travelling 50 km meets a swami who counsels him to go slower. He then proceeds at 3/4 of his former speed and arrives at his destination 35 minutes late. Had the meeting occurred 24 km further the dog would have reached its destination 25 minutes late. The speed of the dog is
(a) 48 km/h (b) 36 km/h
(c) 54 km/h (d) 58 km/h

41. *A*, *B*, and *C* are three participants in a kilometer race. If *A* can give *B* a start of 40 metres and *B* can give *C* a start of 25 metres, how many metres of a start can *A* give to *C*?
(a) 60 m (b) 64 m
(c) 62 m (d) 66 m

42. A monkey ascends a greased pole 12 metres high. He ascends 2 metres in first minute and slips down 1 metre in the alternate minute. In which minute, he reaches the top ?
(a) 21st (b) 22nd
(c) 23rd (d) 24th

43. Mallah can row 40 km upstream and 55 km downstream in 13 h and 30 km upstream and 44 km downstrean in 10 hours. What is the speed of Mallah in still water?
(a) 6 km/h (b) 12 km/h
(c) 3 km/h (d) 8 km/h

44. A passenger sitting in a train of length 100 m, which is running with speed of 60 km/h passing through two bridges, notices that he crosses the first bridge and the second bridge in time intervals which are in the ratio of 7 : 4 respectively. If the length of first bridge be 280 m, then the length of second bridge is:
(a) 490 m (b) 220 m
(c) 160 m (d) Can't be determined

45. A tiger is 50 of its own leaps behind a deer. The tiger takes 5 leaps per minute to the deer's 4. If the tiger and the deer cover 8 m and 5 m per leap respectively, what distance will the tiger have to run before it catches the deer?
(a) 600 m (b) 700 m
(c) 800 m (d) 1000 m

46. A candle of 6 cm long burns at the rate of 5 cm in 5 h and another candle of 8 cm long burns at the rate of 6 cm in 4h. What is the time required by each candle to remain of equal lengths after burning for some hours, when they start to burn simultaneously with uniform rate of burning?
(a) 1 h (b) 1.5 h
(c) 2 h (d) None of these

47. Two persons start from the opposite ends of a 90 km straight track and run to and fro between the two ends. The speed of first person is 30 m/s and the speed of other is 125/6 m/s. They continue their motion for 10 hours. How many times they pass each other?
(a) 10 (b) 9
(c) 12 (d) None of these

48. At what time after 3:10 am, the acute angle made by the minute and hour-hand is double to that of a 3:10 am, for the first time?
(a) 4 h 43 min (b) 3 h 48 min
(c) $3h\frac{320}{11}$min (d) None of these

49. A swiss watch is being shown in a museum which has a very peculiar property. It gains as much in the day as it loses during night between 8 pm to 8 am. In a week how many times will the clock show the correct time?
(a) 6 times (b) 14 times
(c) 7 times (d) 8 times

50. The metro service has a train going from Mumbai to Pune and Pune to Mumbai every hour, the first one at 6 a.m. The trip from one city to other takes 4½ hours, and all trains travel at the same speed. How many trains will you pass while going from Mumbai to Pune if you start at 12 noon?

(a) 8 (b) 10
(c) 9 (d) 13

51. A wall clock gains 2 minutes in 12 hours, while a table clock loses 2 minutes in 36 hours; both are set right at noon on Tuesday. The correct time when they both show the same time next would be

(a) 12 : 30 night (b) 12 noon
(c) 1 : 30 night (d) 12 night

52. A watch loses 2/3% time during the 1st week and gains 1/3% time during the next week. If on a Sunday noon, it showed the right time, what time will it show at noon on the Saturday after the next.

(a) 11 : 26 : 24 a.m. (b) 10 : 52 : 18 a.m.
(c) 10 : 52 : 48 a.m. (d) 11 : 36 : 24 a.m.

53. The time taken by a man to walk five times around the boundary of a square field having 16 hectares as area, at the rate of 5 km per hour is [*SBI PO-2011*]

(a) 16 minutes (b) 24 minutes
(c) 48 minutes (d) 96 minutes
(e) None of these

54. A wheel of a motorbike has radius 35 cm. How many revolutions per minute must the wheel make so that the speed of the bike is 33 km/hr? [*SBI PO-2011*]

(a) 300 (b) 250
(c) 200 (d) 220
(e) None of these

55. An aeroplane flies with an average speed of 756 km/h. A helicopter takes 48 h to cover twice the distance covered by aeroplane in 9 h. How much distance will the helicopter cover in 18 h? (Assuming that flights are non-stop and moving with uniform speed.)

[*IBPS-PO-2013*]

(a) 5010 km (b) 4875 km
(c) 5760 km (d) 5103 km
(e) None of these

56. A car covers four successive 6 km stretches at speeds of 25 kmph, 50 kmph, 75 kmph and 150 kmph respectively. Its average speed over this distance is [*SSC CGL-2012*]

(a) 25 kmph (b) 50 kmph
(c) 75 kmph (d) 150 kmph

57. A wheel rotates 3.5 times in one second. What time (in seconds) does the wheel take to rotate 55 radian of angle? [*SSC CGL-2012*]

(a) 1.5 (b) 2.5
(c) 3.5 (d) 4.5

58. Anil calculated that it will take 45 minutes to cover a distance of 60 km by his car. How long will it take to cover the same distance if the speed of his car is reduced by 15 km/hr? [*SSC CGL-2013*]

(a) 36 min (b) 55.38 min
(c) 48 min (d) 40 min

59. A train 100 metres long moving at a speed of 50 km/hr. crosses a train 120 metres long coming from opposite direction in 6 sec. The speed of the second train is [*SSC CGL-2013*]

(a) 60 km/hr. (b) 82 km/hr.
(c) 70 km/hr. (d) 74 km/hr.

60. It takes 8 hours for a 600 km journey, if 120 km is done by train and the rest by car. It takes 20 minutes more if 200 km is down by train and the rest by car. The ratio of the speed of the train to that of the car is [*SSC CGL-2014*]

(a) 2 : 3 (b) 3 : 2
(c) 3 : 4 (d) 4 : 3

61. If a train runs at 70 km/hour, it reaches its destination late by 12 minutes. But if it runs at 80 km/hour, it is late by 3 minutes. The correct time to cover the journey is [*SSC CGL-2014*]

(a) 58 minutes (b) 2 hours
(c) 1 hour (d) 59 minutes

62. On a journey across Kolkata, a taxi averages 40 kmph for 60% of distance, 30 kmph for 20% of the distance, and 10 kmph for the remainder. The average speed of the whole journey is [*SSC CGL-2014*]

(a) 25 kmph (b) 26 kmph
(c) 24 kmph (d) 30 kmph