

# CSAT

## Time, Speed & Distance

**Copyright © by Vision IAS**

*All rights are reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, without prior permission by Vision IAS.*

1. 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? **(2017)**

- a. 480 km
- b. 260 km
- c. 240 km
- d. 120 km



VISION IAS  
INSPIRING INNOVATION

2. 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? **(2018)**

- a. 12
- b. 15
- c. 16
- d. 18



VISION IAS  
INSPIRING INNOVATION

3. 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? **(2019)**

- a. 20
- b. 25
- c. 30
- d. 35



VISION IAS  
INSPIRING INNOVATION

4. 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 **(2020)**

- 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



VISION IAS  
INSPIRING INNOVATION

5. 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? **(2020)**

- a. 1 : 2
- b. 2 : 1
- c. 1 : 3
- d. 3 : 1



VISION IAS  
INSPIRING INNOVATION

6. A person X from a place A and another person Y from a place B set out at the same time to 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? **(2021)**

1. They take 5 hours to meet.
2. They meet midway between A and B.

**Select the correct answer using the code given below :**

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7. X and Y run a 3 km race along a circular course of length 300 m. Their speeds are in the ratio 3:2. If they start together in the same direction, how many times would the first one pass the other (the start-off is not counted as passing)? **(2022)**

- a. 2
- b. 3
- c. 4
- d. 5



VISION IAS  
INSPIRING INNOVATION



8. Simran and Diya have to travel from Delhi to Chandigarh in their respective cars. Simran drives at 30 km/h while Diya drives at 45 km/h. Find the time taken by Diya to reach Chandigarh if Simran takes 6 hrs.

- (a) 3 hrs.
- (b) 6 hrs.
- (c) 4 hrs.
- (d) 5 hrs.



VISION IAS  
INSPIRING INNOVATION

9. Aman travels from Bina to Delhi on a regular basis. When he travels by car, he can reach there in 8 hours. However, when he travels by bus his speed reduces by one-fourth, and so he travels 125 km less in the same amount of time. Find the speed of his car in km/hr.

- (a) 16 km/hr.
- (b) 62.5 km/hr.
- (c) 40 km/hr.
- (d) 45.5 km/hr.



VISION IAS  
INSPIRING INNOVATION

10. An express train travels at an average speed of 80 km/hr. Starting from its source station, it stops for 3 minutes after travelling every 45 km before reaching its destination. If the distance between source to destination is 720 km, then which of the following can be concluded?

- (a) Without any stoppages, the train would take less than 6 hrs. to travel 720 kms.
- (b) With stoppages the train takes 6 hrs. to travel 720 kms.
- (c) There are 16 stoppages between source and destination.
- (d) There are 15 stoppages between source and destination.



VISION IAS  
INSPIRING INNOVATION

11. Two statements S1 and S2 are given below followed by a Question

**S1:** Vineet walks a certain distance and rides back, taking a total time of 29 minutes.

**S2:** Vineet could walk both ways in 45 minutes.

**Question:** How long would it take Vineet to ride both ways?

- (a) S1 alone is sufficient to answer the question.
- (b) S2 alone is sufficient to answer the question.
- (c) S1 and S2 together are sufficient to answer the question, but neither S1 alone nor S2 alone is sufficient to answer the question.
- (d) S1 and S2 together are not sufficient to answer the question.

12. In the following question two quantities are given. Compare the numeric value of both the quantities and answer accordingly.

Sum of downstream speed and upstream speed of a boat is 24 km/ hr, while speed of that boat in still water is 200% more than the speed of stream.

**Quantity I:** Time taken to cover 96 km downstream.

**Quantity II:** Time taken to cover 60 km upstream.

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I  $\geq$  Quantity II
- (d) Quantity I  $\leq$  Quantity II

13. The distance between Indore and Delhi is 864 km. A train starts from Delhi with a speed of 80 km/h and another train starts from Indore at the same time with a speed of 40 km/h. Both trains maintain their initial speeds till they complete their journeys. After how much time will both trains meet?

- (a) 9 hours
- (b) 8 hours
- (c) 7.2 hours
- (d) 8.3 hours



VISION IAS  
INSPIRING INNOVATION

14. In a 100 metres race, Gagan starts 30 metres ahead of Raja, but Raja wins the race while Gagan is still 10 metres behind. If both start running at the same time, then what is the ratio of the speeds of Raja and Gagan?

- (a) 2 : 3
- (b) 4 : 3
- (c) 5 : 3
- (d) 3 : 5



VISION IAS  
INSPIRING INNOVATION

15. Which of the following statements is correct?

- I. A boat can travel 24 km downstream in 4 hours. If it can travel 32 km upstream in 8 hours, then speed of stream is 2 km/hr.
- II. Length of a train is 1650 metres. If it can cross a 1950 metre long platform in 240 seconds, then the speed of that train is 80 km/hr.

- (a) Neither I nor II
- (b) Both I and II
- (c) Only I
- (d) Only II



16. Excluding stoppages, the speed of a bus is 84 kmph and including stoppages, it is 70 kmph. For how many minutes does the bus stop per hour?

- (a) 10 minutes
- (b) 8 minutes
- (c) 15 minutes
- (d) 12 minutes



VISION IAS  
INSPIRING INNOVATION

17. The speed of a ball going towards the boundary line is 4 m/s and the fielder follows it at a speed of 5.2 m/s. If the initial distance between the fielder and the ball is 3.6 meters then how much time will he take to catch the ball?

- (a) 3 seconds
- (b) 5 seconds
- (c) 4 seconds
- (d) 6 seconds



VISION IAS  
INSPIRING INNOVATION

18. The speed of a boat in still water is 14 km/h and the speed of the stream is 10 km/h. Total distance covered by a boat in travelling from its source to destination and coming back from destination to source is 528 km. Find the total time taken by the boat in the journey.

- (a) 66 hours
- (b) 46 hours
- (c) 44 hours
- (d) 77 hours



VISION IAS  
INSPIRING INNOVATION

19. Calculate the average speed of Siddhartha if he moves for the first 3 hours of his ride at 46 km/hr. and the remaining distance in 5 hours at 62 km/hr. ?

- (a) 55 km/hr.
- (b) 56 km/hr.
- (c) 54 km/hr.
- (d) 58 km/hr.



VISION IAS  
INSPIRING INNOVATION

# Keys

1 – C	11 – C
2 – D	12 – B
3 – B	13 – C
4 – B	14 – C
5 – D	15 – A
6 – C	16 – A
7 – B	17 – A
8 – C	18 – D
9 – B	19 – B
10 – D	



# Thanks!

**Copyright © by Vision IAS**

*All rights are reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, without prior permission by Vision IAS.*