Aptitude Problems on Trains Questions with Answers Pdf

1. A 280 metre long train crosses a platform thrice its length in 50 seconds. What is the speed of the train in km/hr?

a. 60.48

b. 64.86

c. 80.64

d. 82.33

Ans: C

Length of train = 280 m. Length of platform
$$= (3 \times 280) \text{ m} = 840 \text{ m.}$$

$$\therefore \text{ Speed of train} = \left(\frac{280 + 840}{50} \right) \text{m/sec} = \frac{1120}{50} \text{m/sec}$$

$$= \left(\frac{1120}{50} \times \frac{18}{5} \right) \text{km/hr} = 80.64 \text{ km/hr.}$$

2. A train, 150 m long takes 30 seconds to cross a bridge 500 m long. How much time will the train take to cross a platform 370 m long?

a. 18 sec

b. 24 sec

c. 30 sec

d. 36 sec

Ans: B

$$\text{Speed of the train} = \left(\frac{150 + 500}{30} \right) \text{m/sec} = \left(\frac{65}{3} \right) \text{m/sec.}$$

$$\therefore \text{ Required time} = \left[\frac{150 + 370}{\left(\frac{65}{3} \right)} \right] \text{sec} = \left(520 \times \frac{3}{65} \right) \text{sec}$$

$$= 24 \text{ sec.}$$

3. A train covers a distance of 12 km in 10 minutes. If it takes 6 seconds to pass a telegraph post, then the length of the train is

a. 90 m

b. 100 m

c. 120 m

d. 140 m

Ans: C

$$\text{Speed} = \left(\frac{12}{10} \times 60\right) \text{km/hr} = \left(72 \times \frac{5}{18}\right) \text{m/sec} = 20 \text{ m/sec.}$$

Length of the train = (Speed × Time)
$$= (20 \times 6) \text{ m} = 120 \text{ m.}$$

4. A jogger running at 9 kmph alongside a railway track is 240 metres ahead of the engine of a 120 metre long train running at 45 kmph in the same direction. In how much time will the train pass the jogger?

a. 3.6 sec

b. 18 sec

c. 36 sec

d. 72 sec

Ans: C

Speed of train relative to jogger = (45 − 9) km/hr = 36

$$\text{km/hr} = \left(36 \times \frac{5}{18}\right) \text{m/sec} = 10 \text{ m/sec.}$$

Distance to be covered = (240 + 120) m = 360 m.

$$\therefore \text{Time taken} = \left(\frac{360}{10}\right) \text{sec} = 36 \text{ sec.}$$

5. A train 110 metres long is running with a speed of 60 kmph. In what time will it pass a man who is running at 6 kmph in the direction opposite to that in which the train is going?

a. 5 sec

b. 6 sec

c. 7 sec

d. 10 sec

Ans: B

Speed of train relative to man = (60 + 6) km/hr = 66

km/hr $= \left(66 \times \dfrac{5}{18}\right)$ m/sec $= \left(\dfrac{55}{3}\right)$ m/sec.

∴ Time taken to pass the man $= \left(110 \times \dfrac{3}{55}\right)$ sec = 6 sec.