



ARMY BURNHALL COLLEGE FOR GIRLS ABBOTTABAD

ENTRANCE TEST 2022

CLASS/PJC
TIME: 1 Hour

SUBJECT: PHYSICS
MAX MARKS: 50

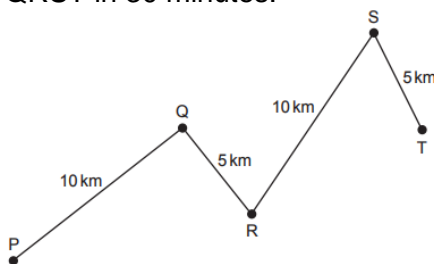
Q.1: Choose the correct option.

1. A child is standing on the platform of a station watching the trains.



A train travelling at 30m/s takes 3s to pass the child. What is the length of the train?

- A. 10m B. 30m C. 90m D. 270m
2. A car driver takes a total of two hours to make a journey of 75 km. She has a coffee break of half an hour and spends a quarter of an hour stationary in a traffic jam. At what average speed must she travel during the rest of the time if she wants to complete the journey in the two hours?
- A 38 km / h B 50 km / h C 60 km / h D 75 km / h
3. A car travels along the route PQRST in 30 minutes.



What is the average speed of the car?

- A 10 km/ hour B 20km/ hour C 30km/ hour D 60km/ hour
4. The table shows the readings on a car speedometer at 5 second intervals.

time / s	speed km/h
0	0
5	30
10	50
15	60
20	65

Which row describes the speed and the acceleration of the car?

	speed	acceleration
A	decreasing	zero
B	decreasing	not zero
C	increasing	zero
D	increasing	not zero

5. Which of the following have a derived unit?
A. Volume B. Width C. Length D. Both A and B
6. A student walks at a constant speed. He takes 100 s to walk 160 paces. The length of each pace is 0.80 m. How far does the student walk in 50s?
A. 64m B. 80m C. 128m D. 256m
7. A car begins to move. It speeds up until it reaches a constant speed. It continues to travel at this constant speed for the rest of the journey. What happens to the acceleration and what happens to the velocity of the car during the journey?
A. Both the acceleration and the velocity change.
B. Only the acceleration changes. C. Only the velocity changes.
D. Neither the acceleration nor the velocity changes.
8. The following statements are about motion.
1. A plane flies due East for 600km.
2. A motorist moving with 20m/s.
3. A snail crawls at 3mm/s in a straight line towards a lettuce.
4. A tourist travels 500km on a journey.
Which statements describe vector quantities?
A. 1 and 2 B. 1 and 3 C. 2 and 3 D. 2 and 4
9. 1m/s is equal to:
A. 3.6km/hr B. 0.278km/hr C. 360km/hr D. 278km/hr
10. 73640 is not equal to
A. 73.640 x 10³ B. 7.3640 x 10⁴ C. 0.73640 x 10⁵ D. 0.73640 x 10⁶

Q.2. A car is uniformly retarded and brought to rest from the speed of 100km/hr in 5sec. Find deceleration?

[3]

Q.3. (i) Would you consider a car turning around a corner at a constant speed to be accelerating?

.....

 [2]

(ii) Will the direction of acceleration be always in the direction of velocity?

.....

 [2]

Q.4. Write the following quantities in standard form.

- a) seconds in a day b) 6500000mm c) 0.00043×10^{-27} d) 7000×10^{-15}

[2]

[1]

[1]

[1]

e) 0.0000089×10^{67}

f) 215.74

[1]

[1]

Q.5. Fig. 5.1 shows a car travelling at 30 m/s on a level road. At this speed the car has to overcome a total force of 600 N opposing the car.

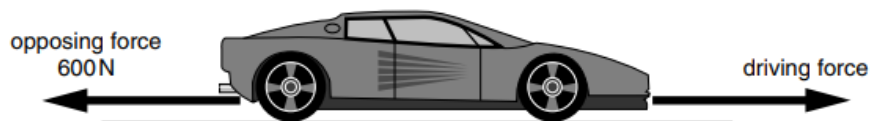


Fig 5.1

(a) (i) Calculate the distance travelled by the car in 10 s.

distance =[3]

(ii) State the value of the driving force produced by the engine for a steady speed of 30 m/s.

.....[1]

(b) While on the level road and travelling at 30 m/s, the driving force becomes zero. The mass of the car is 800 kg. Calculate the deceleration of the car.

deceleration =[3]

Q.6. Fig. 6.1 shows the speed-time graph for the first 125 s of the journey of a lorry

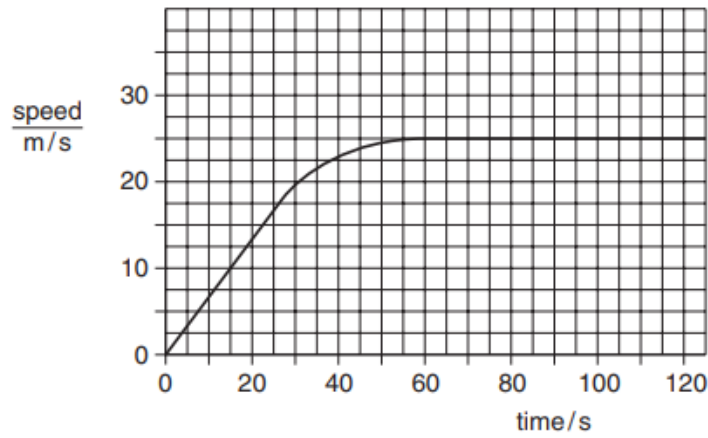


Fig 6.1

(a) During the motion shown, describe what happens to

(i) the speed of the lorry,

.....
.....

.....[3]

(ii) the acceleration of the lorry.

.....
.....
.....

.....[1]

(b) Determine the maximum speed of the lorry in m/s and in km/h.

speed =m/s [1]

speed = km/h [2]

.....[1]

Q.7: What is the effect of balanced forces on a body.

.....
.....

.....[2]