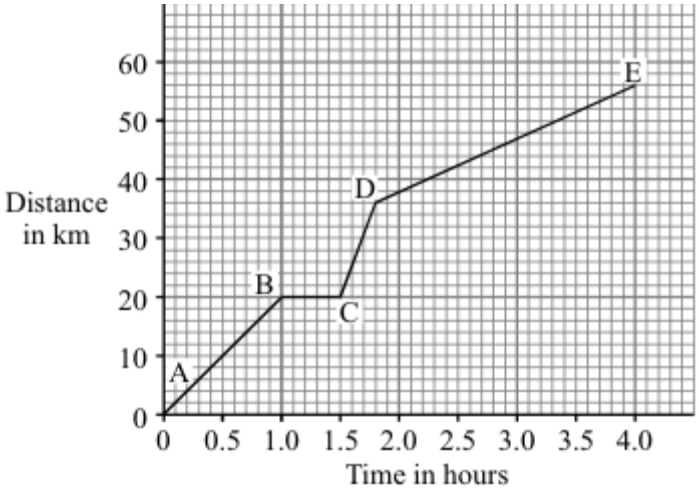
Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic: Forces (Standard Demand Questions)

Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Q1.

A cyclist goes on a long ride. The graph shows how the distance travelled changes with time during the ride.



(i) Between which **two** points on the graph was the cyclist moving at the fastest speed?

_____

(1)

(ii) State **one** way cyclists can reduce the air resistance acting on them.

_____

_____

(1)

(iii) How long did the cyclist stop and rest?

_____

(1)

(iv) Write down the equation which links distance, speed and time.

_____

(1)

(v) Calculate, in km/hr, the average speed of the cyclist while moving.

_____

_____

_____

_____

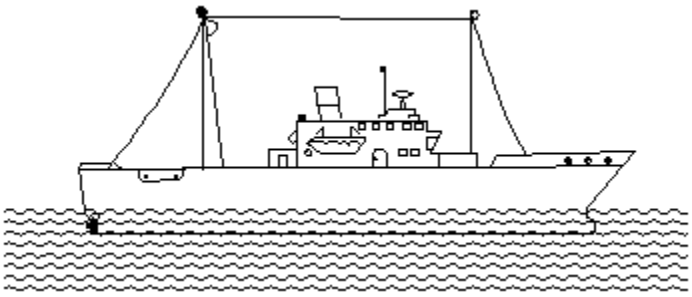
Average speed = _____ km/hr

(3)

(Total 7 marks)

Q2.

The diagram below shows an empty cargo ship. It is not moving.

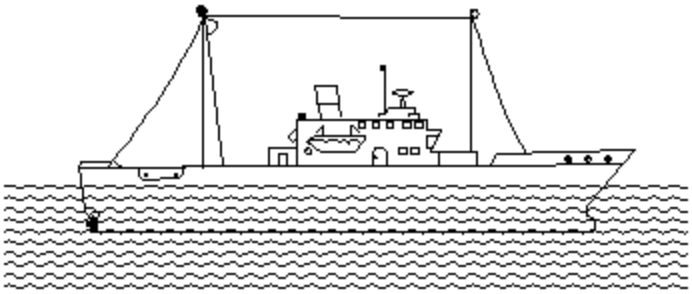


(a) The water exerts a force on the ship. In which direction does this force act?

_____

(1)

(b) The diagram below shows the same cargo ship. This time it has a full load of cargo.



(i) How does the force exerted by the water on the ship change as the ship is loaded?

_____

(1)

(ii) Why has the force exerted by the water changed?

_____

(1)

(Total 3 marks)

Q3.

The manufacturer of a family car gave the following information.

Mass of car 950 kg

The car will accelerate from 0 to 33 m/s in 11 seconds.

(a) Calculate the acceleration of the car during the 11 seconds.

_____

_____

_____

(2)

(b) Calculate the force needed to produce this acceleration.

_____

_____

_____

(2)

(c) The manufacturer of the car claims a top speed of 110 miles per hour. Explain why there must be a top speed for any car.

_____

_____

_____

(3)

(Total 7 marks)