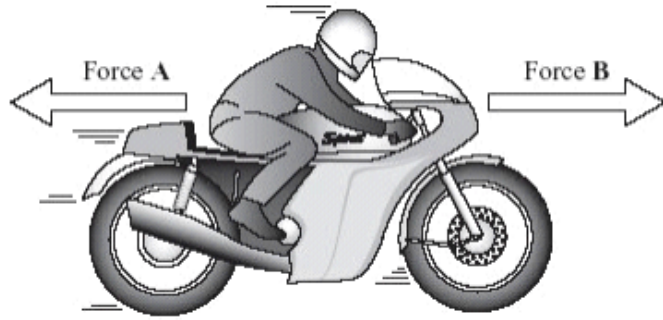


Q1. (a) The diagram shows the horizontal forces that act on a **moving** motorbike.



(i) Describe the movement of the motorbike when force **A** equals force **B**.

.....

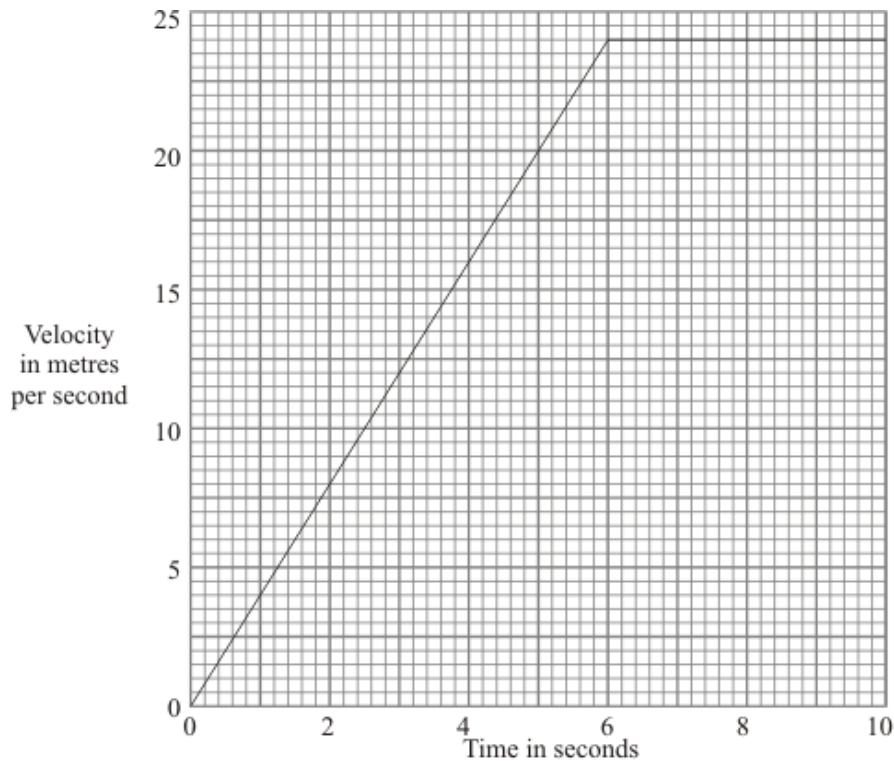
(2)

(ii) What happens to the speed of the motorbike if force **B** becomes smaller than force **A**?

.....

(1)

(b) The graph shows how the velocity of a motorbike changes when it is travelling along a straight road.



(i) What was the change in velocity of the motorbike in the first 5 seconds?

.....

(1)

(ii) Write down the equation which links acceleration, change in velocity and time taken.

.....

(1)

(iii) Calculate the acceleration of the motorbike during the first 5 seconds.
Show clearly how you work out your answer and give the unit.

.....

.....

Acceleration =

(3)

(c) A car is travelling on an icy road.

Describe and explain what might happen to the car when the brakes are applied.

.....

.....

.....

.....

(2)

(d) Name **three** factors, other than weather conditions, which would increase the overall stopping distance of a vehicle.

1

.....

2

.....

3

.....

(3)

(Total 13 marks)

