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

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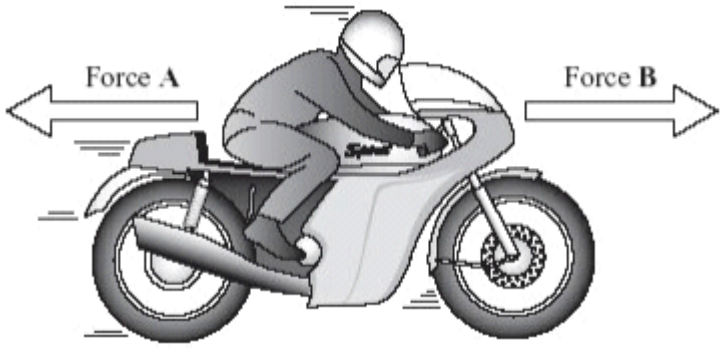
Name of the Student:_____
Max. Marks : 23 Marks **Time : 23 Minutes**

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**.

_____

_____

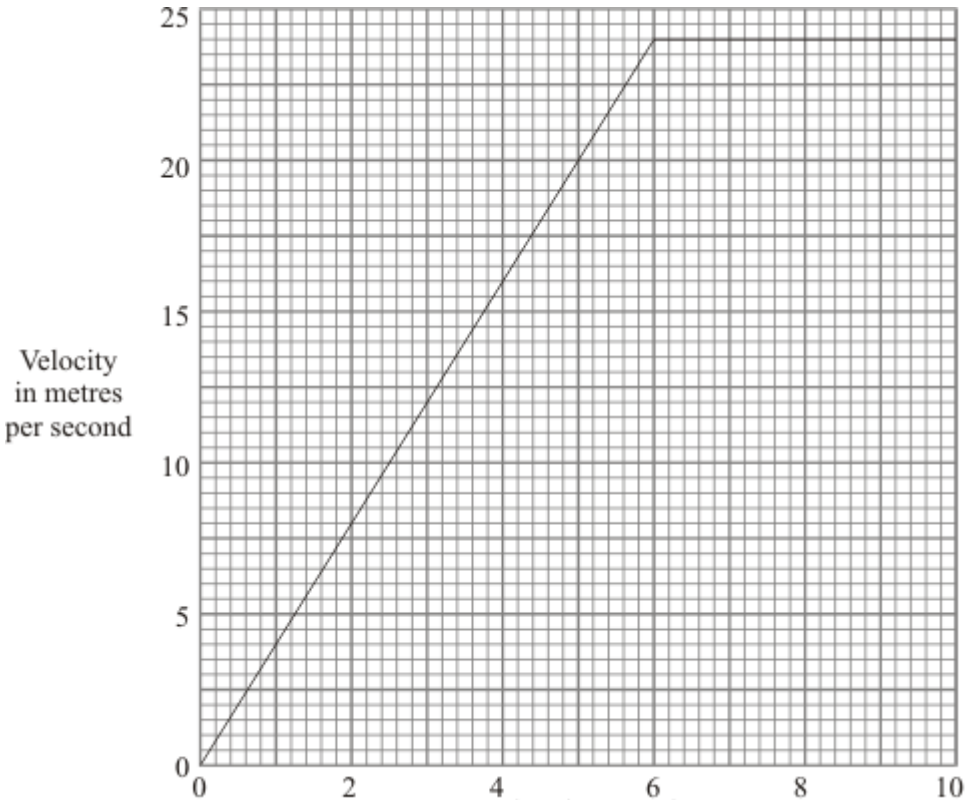
(2)

(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. _____

_____

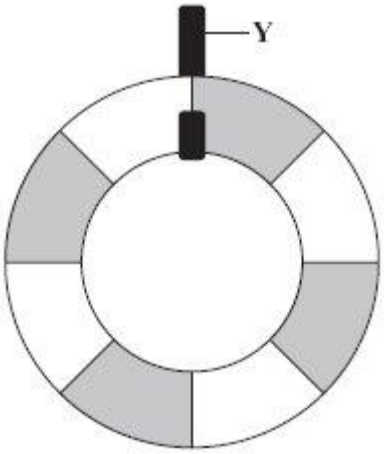
(3)

(Total 13 marks)

Q2.

(a) The diagram shows a lifebelt. It is hanging freely from hook **Y**.

(i) On the diagram, mark with an **X** the point where you think the centre of mass of the lifebelt will be.



(1)

(ii) Explain why you have chosen this point.

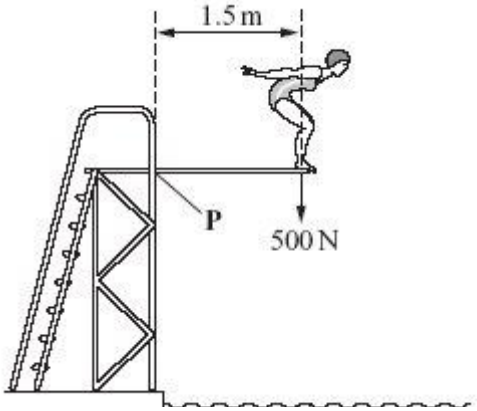
_____

_____

_____

(2)

(b) The drawing shows Susan on a diving board. She is 1.5 metres from point **P** and she weighs 500 N.



Calculate her moment (turning effect) about point **P**.
Show clearly how you work out your answer and give the unit.

_____

_____

Moment about **P** = _____

(3)

(c) Susan has a case with wheels.

When she packs this case, she puts the heaviest items at the end where the wheels are.
This means that the heaviest items are less likely to crush the other contents and it helps her to find things when she opens the case.

Explain another advantage of packing her case in this way.

To gain full marks in this question you should write your ideas in good English. Put them into a sensible order and use the correct scientific words.

_____

_____

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_____

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_____

(4)
(Total 10 marks)