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

Name of the Student:_____
Max. Marks : 22 Marks **Time : 22 Minutes**

Q1.

The stopping distance of a car is the sum of the thinking distance and the braking distance.

(a) Which factors affect the thinking distance?

Tick (✓) **two** boxes.

Condition of the tyres	☐
Driving on wet roads	☐
Mass of the car	☐
Tiredness of the driver	☐
Using a mobile phone	☐

(2)

(b) Explain why a person should **not** drink alcohol and then drive.

_____

_____

_____

_____

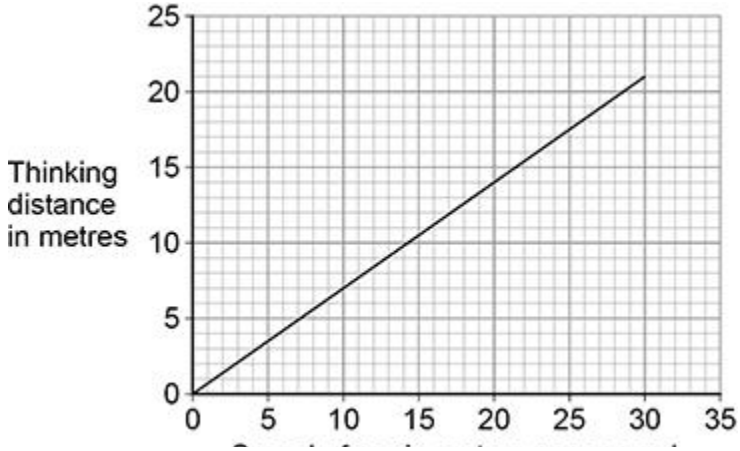
_____

_____

(3)

The Highway Code gives information on how thinking distance depends on the speed of a car.

The figure below shows the information as a graph.



(c) What is the speed of a car if the thinking distance is 16 m?

Speed of car = _____ m/s

(1)

(d) Describe the relationship between speed and thinking distance.

_____

_____

_____

_____

(2)

(e) The Highway Code assumes the driver's reaction time is 0.70 seconds.

Draw a line on the figure above to show the relationship for a driver with a reaction time of 1.4 seconds.

(2)

(f) A car accelerates at 5.0 m/s^2 over a distance of 45 m

initial velocity of the car = 0 m/s

Calculate the final velocity of the car.

Use the Physics Equations Sheet.

Give your answer to 2 significant figures.

_____

_____

_____

_____

_____

_____

_____

_____

Final velocity (2 significant figures) = _____ m/s

(4)

(Total 14 marks)

Q2.

Forces are either contact forces or non-contact forces.

(a) Which of the following is a non-contact force?

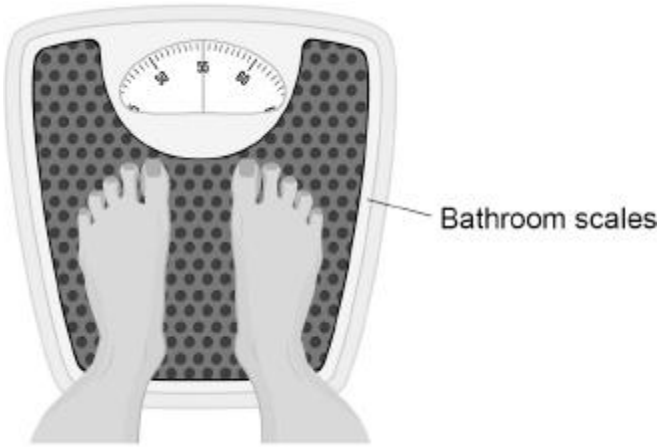
Tick (✓) **one** box.

Electrostatic force	☐
Friction force	☐
Tension force	☐

(1)

Figure 1 shows a person standing on some bathroom scales.

Figure 1



The person exerts a downward force on the scales and the scales exert an upward force on the person.

(b) Which sentence about the forces is true?

Tick (✓) **one** box.

The downward force is less than the upward force.	☐
The downward force is the same size as the upward force.	☐

The downward force is greater than the upward force. ☐

(1)

(c) What is the name of the upward force on the person?

Tick (✓) **one** box.

Air resistance ☐

Normal contact force ☐

Weight ☐

(1)

(d) The person on the scales has a mass of 55 kg.

gravitational field strength = 9.8 N/kg

Calculate the weight of the person.

Use the equation:

weight = mass × gravitational field strength

_____

_____

_____

Weight = _____ N

(2)

(e) The gravitational field strength is **not** the same at all points on the surface of the Earth.

The gravitational field strength is weakest at the equator.

A person travelled from the UK to the equator.

What happened to the weight of the person?

Tick (✓) **one** box.

The weight decreased. ☐

The weight remained the same. ☐

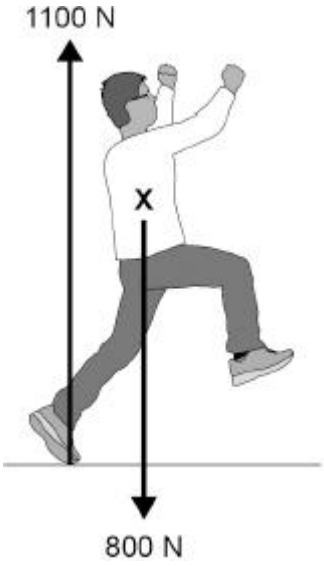
The weight increased. ☐

(1)

Figure 2 shows the forces acting on a person.

The person is about to jump.

Figure 2



(f) The arrow representing the weight of the person is drawn from point **X**.

What is the name given to point **X**?

Tick (✓) **one** box.

Centre of force	☐
Centre of mass	☐
Centre of weight	☐

(1)

(g) Determine the size of the resultant force on the person in **Figure 2**.

_____

_____

Resultant force = _____ N

(1)

(Total 8 marks)