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

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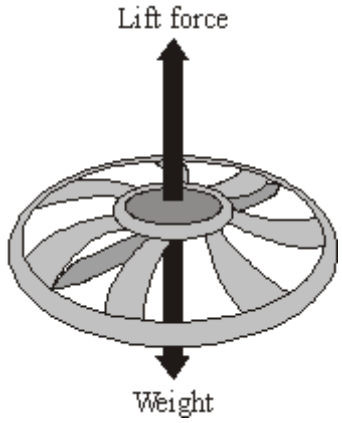
Name of the Student:_____
Max. Marks : 24 Marks **Time : 24 Minutes**

Q1.

The diagram shows the forces on a small, radio-controlled, flying toy.



(a) (i) The mass of the toy is 0.06 kg.
Gravitational field strength = 10 N/kg

Calculate the weight of the toy.

Show clearly how you work out your answer and give the unit.

_____

_____

Weight = _____

(3)

(ii) Complete the following sentence by drawing a ring around the correct line in the box.

When the toy is hovering stationary in mid-air, the lift force is

bigger than
the same as
smaller than

the weight of the toy.

(1)

(b) When the motor inside the toy is switched off, the toy starts to *accelerate* downwards.

(i) What does the word *accelerate* mean?

_____

(1)

(ii) What is the direction of the resultant force on the falling toy?

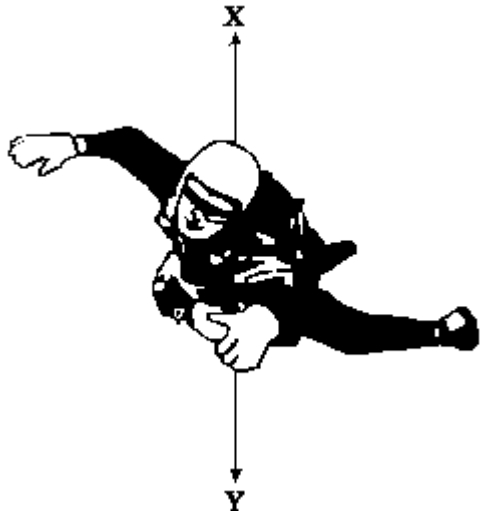
_____

(1)

(Total 6 marks)

Q2.

The diagram shows a sky-diver in free fall. Two forces, **X** and **Y**, act on the sky-diver.



(a) Complete these sentences by crossing out the **two** lines in each box that are wrong.

(i) Force **X** is caused by

friction
gravity
weight

.

(1)

(ii) Force **Y** is caused by

air resistance
friction
gravity

.

(1)

(b) The size of force **X** changes as the sky-diver falls. Describe the motion of the sky-diver when:

(i) force **X** is smaller than force **Y**,

_____

_____

(2)

(ii) force **X** is equal to force **Y**.

_____

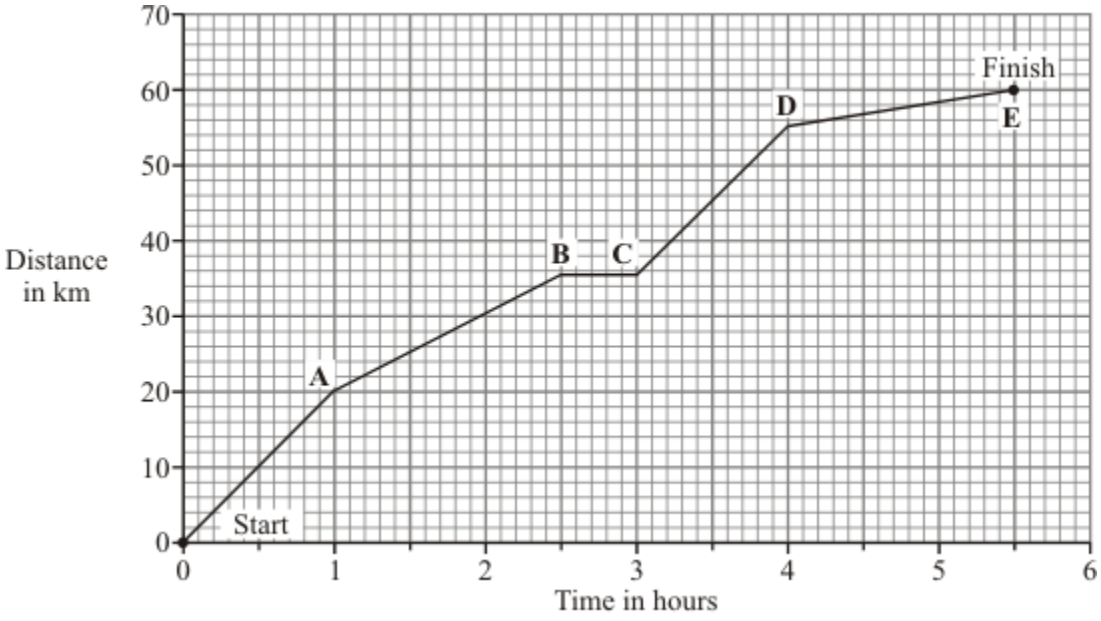
_____

(1)

(Total 5 marks)

Q3.

A horse and rider take part in a long distance race. The graph shows how far the horse and rider travel during the race.



(a) What was the distance of the race?

distance = _____ km

(1)

(b) How long did it take the horse and rider to complete the race?

_____

(1)

(c) What distance did the horse and rider travel in the first 2 hours of the race?

distance = _____ km

(1)

(d) How long did the horse and rider stop and rest during the race?

_____

(1)

(e) Not counting the time it was resting, between which two points was the horse moving the slowest?

_____ and _____

Give a reason for your answer.

_____

_____

(2)

(Total 6 marks)

Q4.

(a) Two skydivers jump from a plane. Each holds a different position in the air.

A

B

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Complete the following sentence.

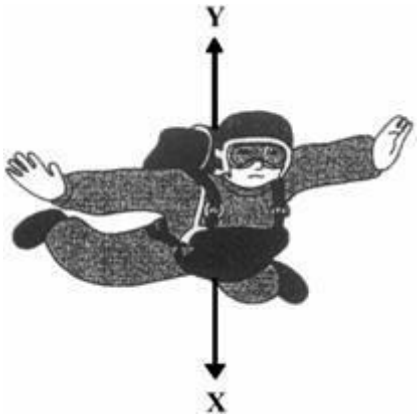
Skydiver _____ will fall faster because_____

_____

_____

(2)

The diagram shows the direction of the forces acting on one of the skydivers.



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(b) In the following sentences, cross out in each box the **two** lines that are wrong.

(i) Force **X** is caused by

air resistance friction gravity

(1)

(ii) Force **Y** is caused by

air resistance gravity weight

(1)

(iii) When force **X** is bigger than force **Y**, the speed of the skydiver will

go up stay the same go down

(1)

(iv) After the parachute opens, force **X**

goes up
stays the same
goes down

(1)

(c) How does the area of an opened parachute affect the size of force **Y**?

_____

_____

(1)

(Total 7 marks)