

BANGLADESH INTERNATIONAL TUTORIAL LIMITED

Physics Worksheet

Class X

Subject Teacher: P.K. Saha

WEEK 02

MARKS: 30

STUDENT'S NAME: _____

DATE: 4/4/2020

1 (a) Diagram 1 shows the orbits of two objects.

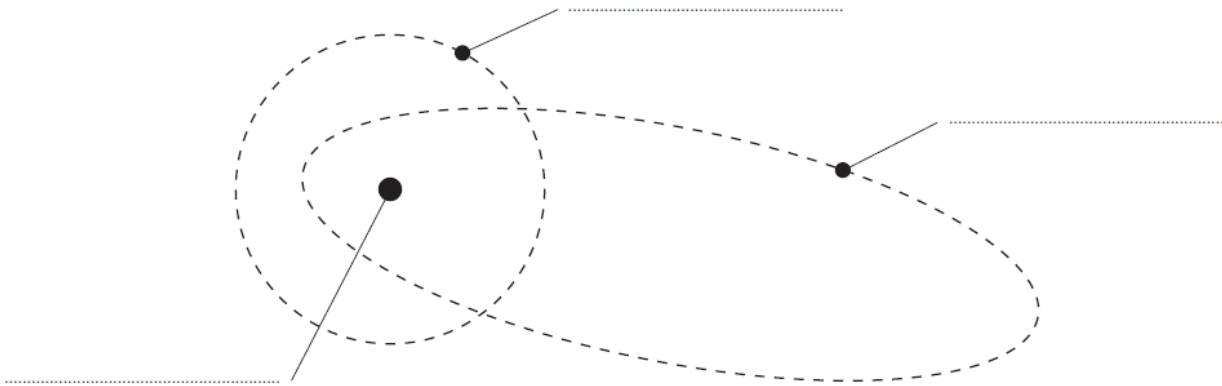


Diagram 1

Select words from the box to add the three missing labels to diagram 1.

(3)

comet	planet	solar system	star
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(b) Diagram 2 shows the Moon orbiting the Earth.

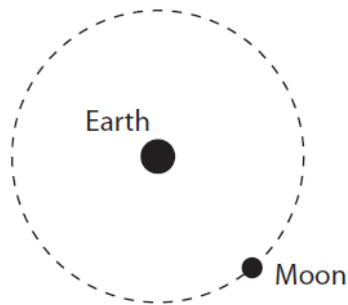


Diagram 2

Draw an arrow on diagram 2 to show the gravitational force acting on the Moon due to the Earth.

(1)

(c) Give a name for a large collection of billions of stars.

(1)

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2 The photograph shows a child bouncing on a trampoline.



(a) The box lists some types of energy.

chemical	elastic	gravitational	kinetic	thermal
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The passage describes the process of bouncing on the trampoline.

Use words from the box to complete the passage.

Each word may be used once, more than once or not at all.

(4)

As the child falls, his energy

is mostly transferred to energy.

When the child hits the trampoline, his energy

is transferred to energy.

(b) Trampolines have springs that stretch and compress.

A student investigates a spring to see if it obeys Hooke's law.

She measures the extension of a spring for a range of different stretching forces.

(i) Describe how the student could measure the extension of the spring.

(3)

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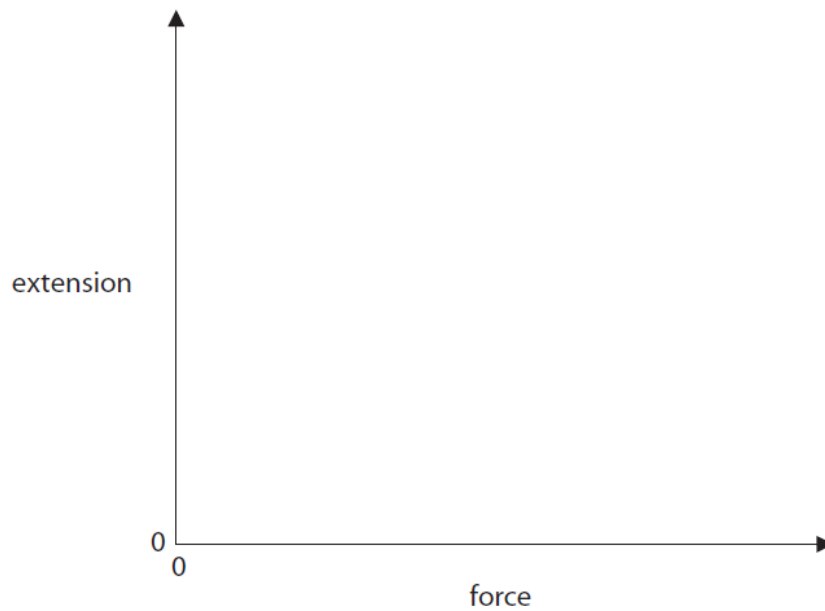
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(ii) The student finds that the spring does obey Hooke's law.

Sketch a graph of her results on the axes.

(2)



(Total for Question 2 = 9 marks)

3 The photograph shows an electrical appliance called a toaster.



(a) The toaster has a power of 1800 W when operating at a voltage of 230 V .

(i) State the equation linking power, current and voltage.

(1)

(ii) Show that the current in the toaster is about 8 A .

(2)

(iii) Which fuse rating would be suitable for the toaster?

(1)

- A 1 A
- B 3 A
- C 7 A
- D 13 A

(b) The toaster uses mains electricity.

Mains electricity provides alternating current.

(i) Describe the difference between alternating current (a.c.) and direct current (d.c.).

(2)

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(ii) State a source of direct current.

(1)

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(Total for Question 3 = 7 marks)

4 A student has a small piece of steel.

Describe an experiment that he could do to find the density of steel.

You may draw a diagram to help your answer.

(5)

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(Total for Question 4 = 5 marks)

5. Describe an incident to show that angle of incident is equal to angle of refraction. Your description must contain

a) List of apparatus needed

b) How do you verify angle of incidence is equal to angle of refraction

(4marks)