

**Eduqas Physics GCSE**  
**Topic 10.1: Solar**  
**system**  
**Questions by topic**

1.

Earth	Universe	Milky Way	Sun	Solar system
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(a) Write the objects named above in order of **increasing size**. [4]

.....  
Smallest Largest

(b) Which one of the above objects is a galaxy? ..... [1]

2.

**3** The first artificial satellite to orbit the Earth was launched into space in 1957.

Describe the orbit of an artificial satellite.

[1 mark]

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**4** What provides the force needed to keep a satellite in its orbit?

Tick **one** box.

[1 mark]

friction

gravity

tension

3.

(a) Which row of the table shows these objects in the correct order of size?

Put a cross (☒) in the box next to your answer.

(1)

	smallest	→	biggest
<input type="checkbox"/> A	Milky Way		Solar System
<input type="checkbox"/> B	Milky Way		Universe
<input type="checkbox"/> C	Solar System		Universe
<input type="checkbox"/> D	Solar System		Milky Way

4.

The diagram shows four moons which orbit Jupiter.



(a) (i) Complete the sentence by putting a cross (☒) in the box next to your answer.

Jupiter is

(1)

- A a comet
- B a galaxy
- C a planet
- D a universe

(ii) Galileo used a new invention to observe these moons.

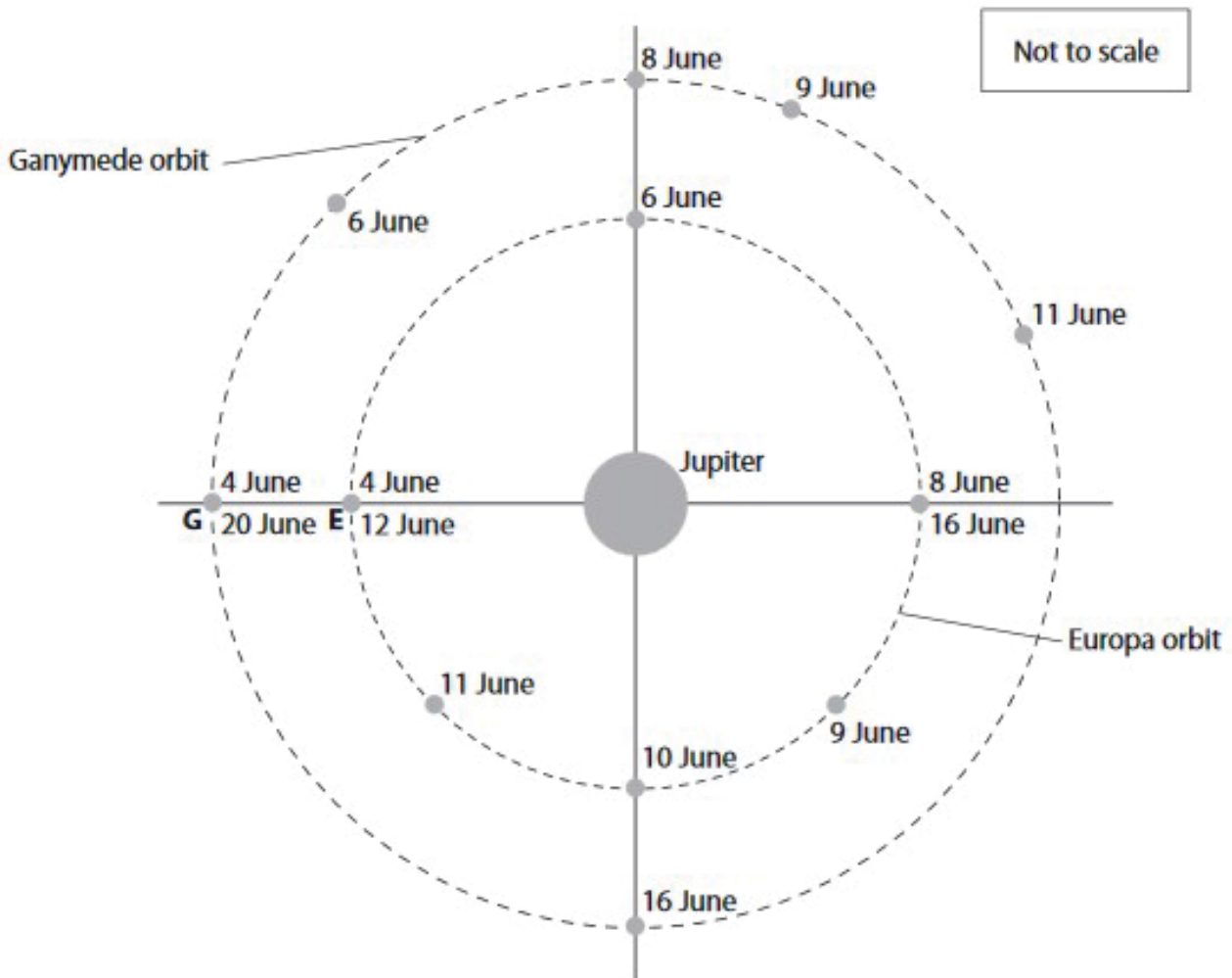
The invention he used was called a .....

(1)

(b) The diagram shows the moons Europa (E) and Ganymede (G) in orbit round Jupiter.

The radius of Europa's orbit is 671 000 km.

The radius of Ganymede's orbit is 1 070 000 km.



The positions of the moons on some dates are marked.

- (i) On which one of the marked dates were the moons closest together? (1)

.....

- (ii) Use information from the diagram to calculate the time for Ganymede to complete one orbit of Jupiter. (1)

time for one orbit = ..... days



5.

This passage is from a science magazine.

*A star forms when enough dust and gas are pulled together. Masses smaller than a star may also be formed when dust and gas are pulled together.*

(a) What is the force which pulls the dust and gas together?

..... (1)

(b) Complete the sentences.

(i) The smaller masses may be attracted by the star and become

..... (1)

(ii) Our nearest star, the Sun, is stable because the gravitational forces and the radiation pressure are .....

(1)

(iii) The Sun is one of billions of stars in the galaxy called the

..... (1)

(Total 4 marks)

6.

(a) Choose the best words from the box to complete the following sentences.

<b>billions</b>	<b>fission</b>	<b>friction</b>	<b>fusion</b>	<b>gases</b>
<b>gravity</b>	<b>liquids</b>	<b>millions</b>	<b>thousands</b>	

(i) Stars form when enough dust and .....  
from  
space are pulled together by .....

(2)

(ii) Stars are able to give out energy for millions of years by the process of  
.....

(1)

(iii) The Sun is one of many ..... of stars in our  
galaxy.

(1)

(b) What is the name of our galaxy?

.....

(1)

(Total 5 marks)



7.

Astronomers claim that there are about 300 billion stars in the Milky Way.

(a) Describe how stars are formed.

.....  
.....  
.....  
.....  
.....  
.....

(3)

(b) Use the correct answer from the box to complete the sentence.

<b>decay</b>	<b>fission</b>	<b>fusion</b>
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Energy is released in stars by the process of nuclear .....

(1)

(c) State why a star is stable during the 'main sequence' period of its life cycle.

.....  
.....

(1)