

**Name of the Student:** \_\_\_\_\_

**Max. Marks : 17 Marks**

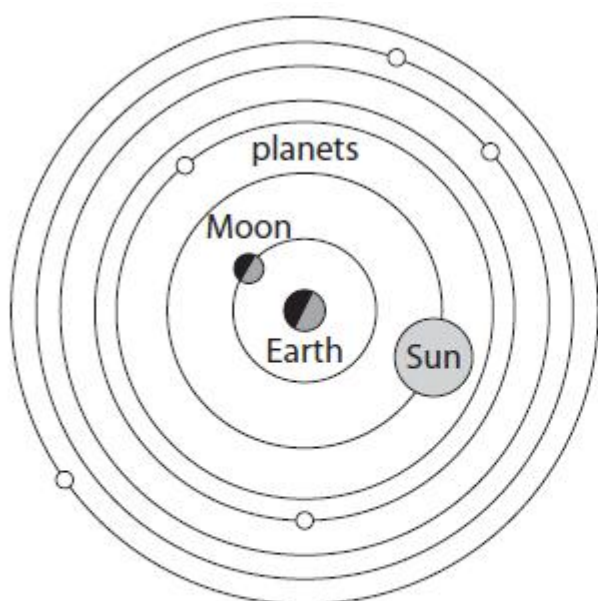
**Time : 17 Minutes**

Q1.

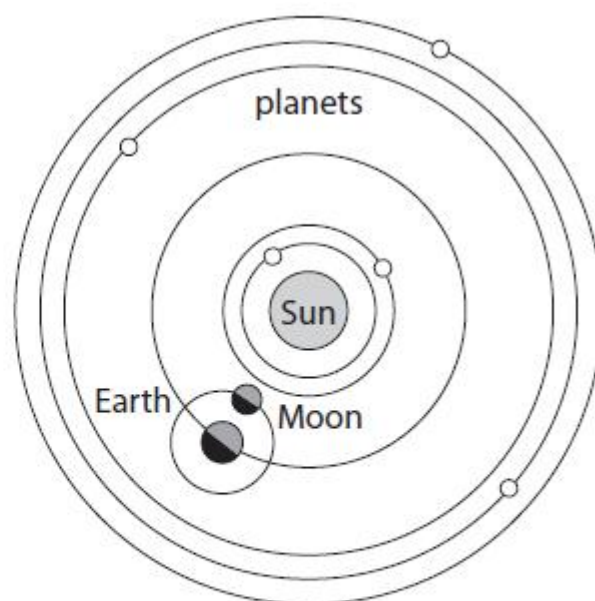
\* More than two thousand years ago the Earth was believed to be at the centre of the universe as shown in Figure 13.

The planets, the Moon and the Sun were believed to be in orbit around the Earth.

In 1543 Nicolaus Copernicus proposed that the Earth was a planet, and that the Earth and the other planets orbit around the Sun. This model is shown in Figure 14.



**Figure 13**



**Figure 14**

Discuss how evidence has changed our views of the universe.

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**(Total for question = 6 marks)**

Q2.

Some questions must be answered with a cross in a box(☒). If you change your mind about an answer, put a line through the box(☒)and then mark your new answer with a cross(☒).

(i) Which will be the next stage in the evolution of our Sun?

(1)

- ☐ A red dwarf
- ☐ B red giant
- ☐ C white dwarf
- ☐ D white giant

(ii) The core of a star with a much bigger mass than our Sun is most likely to end as a

(1)

- ☐ A white dwarf
- ☐ B red giant
- ☐ C protostar
- ☐ D black hole

(Total for question = 2 marks)

Q3.

The Big Bang theory and the Steady State theory are two theories about the origin of the universe.

The discovery of CMB led scientists to accept only one of the theories.

Explain why redshift supports both theories but CMB supports only one of them.

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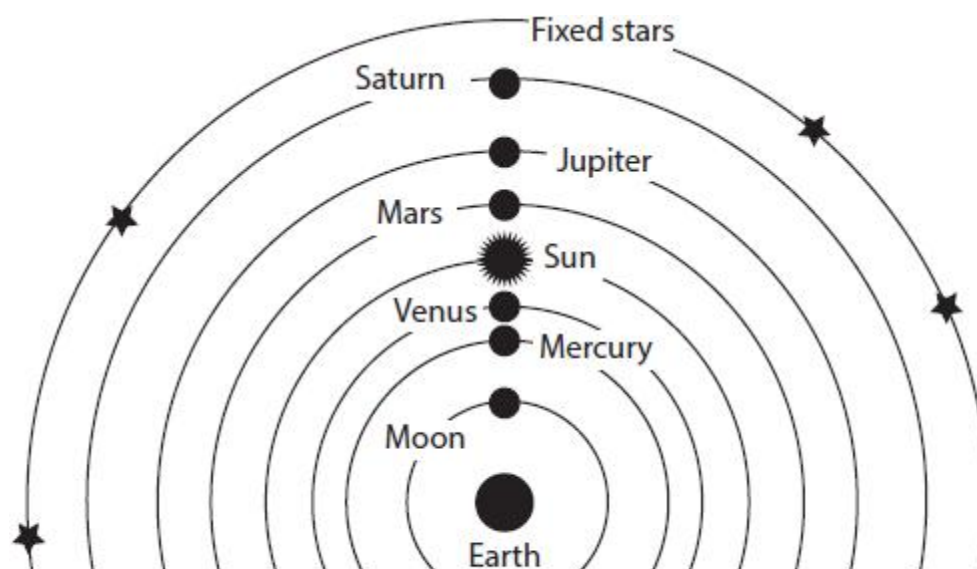
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**(Total for question = 3 marks)**

Q4.

A long time ago, many people thought that the objects seen in the sky were arranged as shown in Figure 17.



**Figure 17**

Compare the arrangement shown in Figure 17 with what we now know about the Solar System.

Your answer should refer to

- the objects that are in the Solar System
- how these objects are arranged.

You may draw a diagram to help your answer.

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**(Total for question = 6 marks)**