

GCSE Astronomy Planet Earth Questions

Worked solutions can be seen at <https://youtu.be/OrLN6ljVmEU>

Q1.

The average diameter of the Earth is:

- A** 3500 km
- B** 13 000 km
- C** 380 000 km
- D** 150 000 000 km

(Total for question = 1 mark)

Q2.

The most southerly latitude where the Sun is above the horizon for 24 hours on 21st June is called the:

- A** Antarctic Circle
- B** Arctic Circle
- C** Tropic of Cancer
- D** Tropic of Capricorn

(Total for question = 1 mark)

Q3.

(i) Explain why light pollution may affect some naked-eye observations of constellations.

(2)

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(ii) A student begins an observation at midnight on a clear moonless winter night.

Explain why the student notices that more stars are visible half an hour later.

(2)

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(Total for question = 4 marks)

Using information from the previous questions:

- (i) Calculate the circumference of the Earth at the equator ($2\pi r$)
- (ii) Calculate the surface area of the Earth ($4\pi r^2$)
- (iii) Calculate the volume of the Earth ($\frac{4\pi r^3}{3}$)

(Give all your answers in appropriate units)

(i)

(ii)

(iii)

Draw and label a diagram to explain the meaning of the term 'oblate spheroid':

Draw and label a diagram of a globe with all the following reference lines and points:

Equator; Tropic of Cancer; Tropic of Capricorn; Arctic Circle; Antarctic Circle; Prime Meridian; North Pole; South Pole