**Earth, Sun and Moon**

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| Instructions to students  • You have 50 minutes to complete the test.  • Please answer all questions in the spaces provided.  • There is to be no talking during the test. | Marks  Section I: Multiple-choice questions: 5 marks  Section II: Short-answer questions: 12 marks  Section III: Extended-response questions: 8 marks  Total: 25 marks |

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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Score: /25  Grade: % |
| Comments: | |

Section I: Multiple-choice questions

For each question, circle or highlight the correct answer.

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| 1 Night and day on Earth are caused by: | |  |
| A | the Earth spinning around, once, on its axis. |
| B | the Earth completing a single orbit around the Sun. |
| C | the tilt of the Earth on its axis as it orbits the Sun. |
| D | the Moon completing a single orbit around the Earth. |
| 2 Why does the Sun appear to have a different path across the sky in the winter to the path taken in the summer? | | |
| A | The Sun revolves. | |
| B | The Sun rotates. | |
| C | The Earth’s axis is tilted. | |
| D | The distance from the Earth to the Sun changes. | |
| 3 Why was it necessary to send robot explorers to Mars rather than astronauts? | | |
| A | The robot explorers do not require food or water and can be controlled by scientists on Earth. | |
| B | The atmosphere on Mars is toxic for astronauts. | |
| C | It would take too long for astronauts to travel to Mars and back to Earth again. | |
| D | No astronauts volunteered for the mission. | |

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| 4 The different phases of the Moon are caused by: | | |
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| A | the distance of the Moon from the Sun. | |
| B | different parts of the Moon’s surface facing the Earth. | |
| C | the Moon being covered by the Sun’s shadow. | |
| D | only part of the Moon’s surface being in sunlight. | |
| 5 When a total solar eclipse is visible in Australia, the rest of the world: | |  |
| A | sees a partial eclipse. |
| B | will see a different view to what we see. |
| C | will see no eclipse at all. |
| D | sees exactly what we see too. |

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|  | Section I  Total marks:  /5 marks |

Section II: Short-answer questions

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| 6 What is the difference between a space probe and a satellite? | | |
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| 7 ‘A solar and a lunar eclipse are exactly the same thing.’ Do you agree or disagree with this statement? Give your reasons. | | |
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| 8 What does equinox mean, and how many time a year do they occur? | | |
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| 9 New Zealand is to the east of Australia. In which country does the Sun rise first? Explain why this is so. | | |
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| 10 Why do we add an extra day to the calendar (29 February) every four years? | | |
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|  | /3 marks | |
|  | Section II  Total marks:  /12 marks | |

Section III: Extended-response questions

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| 11 Explain why the Sun does not set in midsummer at the North and South Poles. | |
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| 12 The Hubble Space Telescope produces amazing images of the night sky, way beyond that of any ground-based telescope. Explain how telescopes work to produce an image. Why does the Hubble telescope create higher quality images? | |
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|  | Section III  Total marks:  /8 marks |