

**5th NATURAL SCIENCE OLYMPIAD**

**GRADE 7 TO 9**

**07 MAY 2015**

**09:00 - 12:00**

**INSTRUCTIONS**

**Please read the instructions carefully before answering the questions**

This is a multiple choice paper. Please answer all the questions on the answer sheet provided. Each question is followed by answers marked A, B, C and D. **Only one answer is correct**. Choose the most correct answer and shade the corresponding circle on the answer sheet completely using an HB pencil.

**NB!** The answer sheets are marked electronically – do not make any other dots or marks on the answer sheet. Select only one answer for each question or your answer will be discarded. **Ensure that you shade your selection clearly.**

Note that the question numbers 1 – 100 on the answer sheet moves from top to bottom in several columns. Ensure that the number of your selection on the answer sheet corresponds with the number of the question in your examination paper. Should you make a mistake, please erase the incorrect answer completely.

The use of **non-programmable** electronic calculators is permitted.

**To Avoid Disqualification -** You are required to complete **all** the information requested on the answer sheet. Please complete the information in script as well as shade the corresponding blocks. If the corresponding blocks are not shaded appropriately, your results will be returned without a name and you will be disqualified. The student number allocated to you can be obtained from your teacher and consists of eight digits e.g. 08149701

Do not fold the answer sheets.

**Three hours are allowed to answer the questions**

**Natural Science Olympiad 2015**

**Grade 7 to 9**

**SECTION A: GENERAL KNOWLEDGE**

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| 1. | What do we call the space probe pictured below? It was successfully landed on Comet 67P on 17 November 2014? | |
|  | |
| A | Orion |
| B | Philae |
| C | Apollo |
| D | Rosetta |

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| 2. | Which one of the following people received the 2014 Nobel Physics Award? | |
|  | |
| A | Desmond Tutu |
| B | Peter Higgs |
| C | Isamu Akasaki |
| D | Richard Feynman |

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| 3. | Which of the following statements is **not** correct regarding the Big Bang theory? | |
|  | |
| A | The Big Bang theory explains the origin of the universe. |
| B | The Big Bang theory was not formulated by Albert Einstein. |
| C | According to Big Bang theory the universe was created in a few seconds. |
| D | All of these are not correct regarding the Big Bang Theory. |

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| 4. | How many countries are there in the world? | |
|  | |
| A | 160 countries |
| B | 54 countries |
| C | 196 countries |
| D | 450 countries |

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| 5. | Consider the following types of cars: electric car, hybrid car and hydrogen fuel cell car. Which of these cars is the least environmentally friendly? | |
|  | |
| A | A hybrid car |
| B | Electric car |
| C | Hydrogen fuel cell car |
| D | Both hybrid and hydrogen fuel cell cars |

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| 6. | Which car in Question 5 above emits a substance which does not pollute the environment? | |
|  | |
| A | A hybrid car |
| B | Electric car |
| C | Hydrogen fuel cell car |
| D | Both hybrid and hydrogen fuel cell cars |

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| 7. | Water heating for domestic use can be done by using an electric geyser, solar water geyser or coal fired water heater. Which of these methods is the most user friendly but least energy efficient? | |
|  | |
| A | Electric geyser |
| B | Coal fired water heater |
| C | Solar water geyser |
| D | Heat pump |

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| 8. | During cold weather one puts on a thick woollen jersey because … | |
|  | |
| A | Woollen jerseys warm up the body. |
| B | Woollen jerseys prevent heat from escaping from the body. |
| C | Woollen jerseys conduct heat evenly. |
| D | Woollen jerseys store body heat. |

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| 9. | The word HIV stands for … | |
|  | |
| A | Heavy Industrial Virus |
| B | Heavy Influenza Virus |
| C | High Information Visit |
| D | Human Immunodeficiency Virus |

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| 10. | Which animal is currently at risk of becoming extinct due to poaching in South Africa? | |
| A | Rhinoceros |
| B | Lion |
| C | Zebra |
| D | Giraffe |

**SECTION B: SPACE SCIENCE AND ASTRONOMY**

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| 11. | A lunar eclipse is most likely to occur when the … | |
|  | |
| A | Sun is located between the Earth and Moon. |
| B | The Moon is located between the Sun and the Earth. |
| C | The Earth is located between the Sun and the Moon. |
| D | The Earth and Moon are at right angles to each other. |

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| 12. | What planet is known as the red planet? | |
|  | |
| A | Jupiter |
| B | Mars |
| C | Mercury |
| D | Venus |

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| 13. | In which galaxy is the Earth located? | |
|  | |
| A | Milky way |
| B | [Canis Major Dwarf](http://en.wikipedia.org/wiki/Canis_Major_Dwarf) |
| C | [Andromeda Galaxy](http://en.wikipedia.org/wiki/Andromeda_Galaxy) |
| D | [Centaurus A](http://en.wikipedia.org/wiki/Centaurus_A) |

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| 14. | Which theory states that the Universe was created after an explosion? | |
|  | |
| A | Gravitational theory |
| B | Galileo Galilei theory |
| C | Relativity theory |
| D | Big Bang theory |

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| 15. | Which planet has a year which is shorter than its day? | |
|  | |
| A | Jupiter |
| B | Venus |
| C | Saturn |
| D | Pluto |

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| 16. | Which of the following is the name given to a small object made of ice, frozen gas and dust that orbits the Sun? | |
|  | |
| A | Comet |
| B | Meteorite |
| C | Asteroid |
| D | Galaxy |

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| 17. | The approximate number of stars in our galaxy is … | |
|  | |
| A | 200 billion |
| B | 200 thousand |
| C | 2 million |
| D | 2 thousand |

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| 18. | Which planet has the strongest winds? | |
|  | |
| A | Neptune |
| B | Earth |
| C | Mars |
| D | Venus |

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| 19. | The largest moon in the solar system is the … | |
|  | |
| A | Europa |
| B | Calisto |
| C | Ganymede |
| D | Io |

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| 20. | Which planet is named after the Roman goddess of love? | |
|  | |
| A | Venus |
| B | Mercury |
| C | Pluto |
| D | Saturn |

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| 21. | Which planet is the densest? | |
|  | |
| A | Earth |
| B | Mercury |
| C | Pluto |
| D | Mars |

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| 22. | Which set of planets indicated below consists of hydrogen and helium gases with no solid surface? | |
|  | |
| A | Mercury, Venus, Earth and Mars |
| B | Jupiter, Saturn, Uranus and Neptune |
| C | Venus, Jupiter, Saturn, Uranus |
| D | Mars, Saturn, Uranus and Neptune |

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| 23. | Which one of the following statements is **not** correct regarding planet Earth? | |
|  | |
| A | The Earth spins on its axis which is tilted from the vertical by an angle of 23.50. |
| B | The tilt of the Earth’s axis is responsible for the existence of seasons. |
| C | It is winter in South Africa when the solar energy falls at an extreme angle on the southern hemisphere. |
| D | The Earth is held in its orbit around the Sun by the pull of the Sun’s energy. |

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| 24. | Which one of the following statements is correct regarding the ***Earth-Moon-Sun relationship***? | |
|  | |
| A | The moon rotates and orbits the Earth once a month. The Earth rotates once a day on its axis and orbits the Sun once a year. |
| B | The Sun and the Moon orbits around the Earth. |
| C | The position of the Moon relative to the Earth is responsible for the length of day and night. |
| D | The Earth is much bigger than the Moon and the Sun is much smaller than the Earth. |

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| 25. | Which planet is covered by clouds of sulphuric acid? | |
|  | |
| A | Jupiter |
| B | Venus |
| C | Mars |
| D | Pluto |

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| 26. | Which one is the largest planet in the solar system? | |
|  | |
| A | Uranus |
| B | Earth |
| C | Jupiter |
| D | Mars |

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| 27. | Which planet has the longest year? | |
|  | |
| A | Saturn |
| B | Neptune |
| C | Venus |
| D | Jupiter |

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| 28. | What is the Sun? | |
|  | |
| A | The Sun is a planet. |
| B | The Sun is another galaxy. |
| C | The Sun is a star. |
| D | The Sun is another solar system. |

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| 29. | Which planet is the fastest moving planet around the sun in the solar system? | |
|  | |
| A | Earth |
| B | Mercury |
| C | Jupiter |
| D | Neptune |

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| 30. | Which one of the following statements is correct regarding tides? | |
|  | |
| A | The gravity of the Moon, gravity of the Sun and gravity of the stars are responsible for high and low spring tides. |
| B | If you are on the coast and the Moon is directly overhead, you should experience a **high tide.** |
| C | There are two high tides a day. There is about 12 hours and 25 minutes between the two high tides. |
| D | The high tides are very high and the low tides are very low when the Moon is full and the high and low tides are small when the Moon is new. |

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| 31. | Which of the following is responsible for change in the seasons during the year? | |
|  | |
| A | Earth’s rotation around its own axis. |
| B | Moon’s rotation around its own axis. |
| C | Sun’s rotation around its own axis. |
| D | Earth’s revolution around the Sun. |

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| 32. | Choose the correct arrangement of planets starting from the one near the Sun to the one furthest from the Sun is as follows: | |
|  | |
| A | Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. |
| B | Mercury, Venus, Mars, Earth Jupiter, Saturn, Uranus and Neptune. |
| C | Venus, Mercury, Earth and Mars, Jupiter, Saturn, Uranus and Neptune. |
| D | Jupiter ,Mercury, Venus, Earth and Mars, Saturn, Uranus and Neptune. |

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| 33. | The Universe is made up of matter and energy in the proportions shown in the chart below. Which one of the proportions given below gives the correct composition of the universe? | |
|  | |
| A | X represents dark matter, Y represents dark energy and Z represents normal matter. |
| B | X represents normal matter, Y represents dark matter and Z represents dark energy. |
| C | X represents dark energy, Y represents dark matter and Z represents normal matter. |
| D | X represents normal matter, Y represents dark energy and Z represents dark matter. |

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| 34. | The star nearest to our Sun, Proxima Centauri, is about 4.37 light years away. How far is it from the Sun in kilometres? | |
|  | |
| A | 4 000 000km |
| B | 40 000 000km |
| C | 40 000 000 000km |
| D | 40 000 000 000 000km |

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| 35. | Which one of the following statements is correct? | |
|  | |
| A | Supernovas are huge stars that collide in the Milky Way galaxy. |
| B | The violent explosions that light up our Milky Way galaxy marks the birth of a heavyweight star. |
| C | Almost everything on Earth, including human beings, is made of particles that come from stardust. |
| D | Meteoroids are grains of dust and small chunks of rock material left over from the formation of the planets that travel through space. If they enter a planet’s atmosphere and burn up, they are known as meteoroids. |

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| 36. | Which one of the following statements is correct regarding stars? | |
|  | |
| A | The birth places of stars are huge, hot clouds of gas and dust, known as 'nebulas'. |
| B | When a star dies, it expands to become a red giant, then collapses to form a very dense white dwarf which later cools down and becomes invisible. |
| C | The nearest and brightest star to planet Earth is the Southern Cross. |
| D | The coolest, slowest burning stars are red dwarfs. |

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| 37. | Which one of the following leads to serious environmental problems and is not caused by the burning of coal? | |
|  | |
| A | Greenhouse effect |
| B | Ozone layer depletion |
| C | Water pollution |
| D | Air pollution |

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| 38. | Which one of the following objects has a gravitational pull so great that nothing escapes it, not even light? | |
|  | |
| A | Black Hole |
| B | Vortex |
| C | Shooting Star |
| D | Red Giant |

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| 39. | Which statement describes the atmosphere of the planet correctly? | |
|  | |
| A | Venus is made up mostly of carbon dioxide. |
| B | Mercury is made up mostly of nitrogen. |
| C | Earth is made up mostly of oxygen. |
| D | Saturn is made up mostly of iron. |

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| 40. | How long does it take for light from the Sun to reach Earth? | |
|  | |
| A | 1 minute |
| B | 8 minutes |
| C | Instantaneous |
| D | 24 hours |

**SECTION C: NANOTECHNOLOGY**

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| 41. | The prefix "nano" comes from a … | |
|  | |
| A | French word meaning billion. |
| B | Greek word meaning dwarf. |
| C | Latin word meaning particle. |
| D | Greek word meaning invisible. |

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| 42. | A sheet of white paper is approx. 0.1 mm thick. How thick is the paper in nanometers? | |
|  | |
| A | 100nm |
| B | 1 000nm |
| C | 10 000nm |
| D | 100 000nm |

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| 43. | What is nanotechnology? | |
|  | |
| A | Nanotechnology involves the manipulation of matter at length scales of 1000 nm. |
| B | Nanotechnology is a term for the development of innovative applications and materials with at least one dimension smaller than 100 nanometres (nm). |
| C | Nanotechnology is a study on fundamental relationships between physical properties and phenomena and material dimensions in the nanometer scale. |
| D | Nanotechnology relates to the ability to build functional devices based on the controlled assembly of materials for specific technological applications. |

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| 44. | Who was the first person to use the term nanotechnology? | |
|  | |
| A | Richard Feynman |
| B | Albert Einstein |
| C | Eric Drexler |
| D | Robert Higgs |

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| 45. | In which year was the term nanotechnology used for the first time? | |
|  | |
| A | 1947 |
| B | 1986 |
| C | 2005 |
| D | 1959 |

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| 46. | Which one of the following is not an example of a nano object? | |
|  | |
| A | Nanodot |
| B | Nanotubes |
| C | Nanoplatelets |
| D | Nanocup |

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| 47. | If the diameter of one oxygen atom is 0.14nm, how many oxygen atoms lined up in a row would fit in a one nanometer space? | |
|  | |
| A | One |
| B | Seven |
| C | Seventy |
| D | None |

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| 48. | Which nanoparticles are used in sun block creams that protect the skin from harmful ultra violet radiation? | |
|  | |
| A | Zinc oxide nanoparticles |
| B | Copper oxide nanoparticles |
| C | Iron oxide nanoparticles |
| D | Titanium oxide nanoparticles |

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| 49. | Scientists believe that the greatest health risk that can be posed by nanoparticles is through … | |
|  | |
| A | Inhalation of nanoparticles. |
| B | Penetration of healthy human skin by nanoparticles. |
| C | Swallowing nanoparticles. |
| D | Radiation from nanoparticles. |

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| 50. | Nanotechnology has been identified as essential in solving many of the problems facing humanity. Which of these will likely be solved by nanotechnology? | |
|  | |
| A | Provision of renewable clean energy |
| B | Supply of clean water globally |
| C | Improved health and longevity |
| D | All of these |

**SECTION C: GENERAL CONTENT KNOWLEDGE**

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| 51. | The diagram below illustrates an important biological process. What is the name given to the process shown below? | |
|  | |
| A | Respiration |
| B | Mitosis |
| C | Meiosis |
| D | Photosynthesis |

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| 52. | The diagram below shows a food web. Which one of the following may result in the population of foxes decreasing and that of crickets increasing? | |
|  | | |
| A | A deadly disease affecting alligators |
| B | Alligator population bloom |
| C | Decrease in maple trees |
| D | Abundance of food for foxes |

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| 53. | Which one of the following is NOT a characteristic of ALL living things? | |
|  | |
| A | Living things grow. |
| B | Living things need nutrition. |
| C | Living things talk. |
| D | Living things reproduce. |

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| 54. | Complete the table below by choosing the letter corresponding to the correct words represented by the letters P to T. | | | | | |
| |  | | --- | | Kingdom | | P | | Q | | R | | S | | T | | Species | | | | | | |
|  |  | | | | |
|  | **P** | **Q** | **R** | **S** | **T** |
| A | Genus | Family | Order | Class | Phylum |
| B | Order | Family | Genus | Class | Phylum |
| C | Phylum | Class | order | family | Genus |
| D | Phylum | Order | Class | Genus | Family |

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| 55. | Which feature is found in plant cells but **not** in animal cells? | |
|  | |
| A | Vacuole |
| B | Cytoplasm |
| C | Nucleus |
| D | Cell membrane |
| 56. | In the diagram below, the leaf contains starch. What colour will be observed after the leaf is treated with iodine solution? | |
|  | |
| A | Red |
| B | Blue-black |
| C | Yellow |
| D | Pink |

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| 57. | The diagram below shows one of the most important systems in a human being. | |
| What is the name of the system shown above? | |
| A | Endocrine system |
| B | Skeletal System |
| C | Circulatory System |
| D | Nervous system |

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| 58. | Label the numbered parts of the human heart. | | | | |
|  | | | | |
|  | | | | |
|  | **2** | **3** | **4** | **10** |
| A | Mitral valve | Aortic valve | Aorta | Pulmonary artery |
| B | Bicuspid valve | Inferior vena cava | Pulmonary valve | Inferior vena cava |
| C | Right atrium | Right ventricle | Tricuspid valve | Superior Vena cava |
| D | Pulmonary artery | Aorta | Mitral valve | Vein |

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| 59. | Which one of the following is **not** a characteristic of non-metals? | |
|  | |
| A | Ductile |
| B | Brittle |
| C | Poor conductors |
| D | Low melting and boiling points |

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| 60. | To which group of the periodic table does the atom shown below belong? | |
|  | |
| A | 8 |
| B | 2 |
| C | 6 |
| D | 16 |

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| 61. | The diagrams below shows two naturally occuring atoms of carbon. | |
| The above example illustrates the existence of … | |
| A | Allotropes |
| B | Isotopes |
| C | Isomers |
| D | Monomers |

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| 62. | Which letter correctly labels the diagrams shown below? | | | | |
|  | | | | |
|  | **W** | **X** | **Y** | **Z** |
| A | Mixture | Element | Compound | Compound |
| B | Compound | Mixture | Element | Element |
| C | Element | Mixture | Mixture | Compound |
| D | Element | Element | Compound | Mixture |

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| 63. | The diagram below shows phase changes for a certain substance. Choose the letter corresponding to the correct label of phase changes.  S=Solid  G=Gas  L=Liquid | | | | |
|  | | | | |
|  | **1** | **2** | **3** | **4** |
| A | Sublimation | Condensation | Melting | Freezing |
| B | Melting | Freezing | Condensation | Evaporation |
| C | Boiling | Melting | Freezing | Condensation |
| D | Freezing | Condensation | Sublimation | Deposition |

|  |  |  |
| --- | --- | --- |
| 64. | Which of the following substances will have a pH of 4? | |
|  | |
| A | Water |
| B | Hydrochloric acid |
| C | Lemon juice |
| D | Sodium hydroxide |

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| --- | --- | --- |
| 65. | Copper II Carbonate (CuCO3) reacts with enough hydrochloric acid (HCℓ) in a beaker. Which list gives the correct products? | |
|  | |
| A | Copper Chloride, Carbon dioxide and Water |
| B | Copper oxide, Hydrogen chloride and carbon dioxide |
| C | Copper, hydrogen carbonate and chlorine gas |
| D | Copper Chloride, Carbon dioxide, water and chlorine gas |

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| 66. | As the reaction shown below progresses, what will be observed in the test tube containing lime water? | |
|  | |
| A | Limewater turns black |
| B | Limewater turns milky white |
| C | Limewater turns blue |
| D | Limewater turns yellow |

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| 67. | By what method is heat transferred from the Sun to the Earth as shown in the diagram below? | |
|  | |
| A | Conduction |
| B | Convection |
| C | Radiation |
| D | Diffusion |

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| 68. | Which one of the following symbols indicates a fuse? | |
| A |  |
| B |  |
| C |  |
| D |  |

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| 69. | An electric current of 5 A is same as… | |
|  | |
| A | 5 J / C |
| B | 5 V / C |
| C | 5 C / sec |
| D | 5 w / sec |

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| --- | --- | --- |
| 70. | A circuit contains two unequal resistors in parallel. Which one of the following statements about this circuit is correct? | |
|  | |
| A | current is same in both. |
| B | large current flows in larger resistor. |
| C | potential difference across each is same. |
| D | smaller resistance has smaller conductance. |
| 71. | The resistance across AB is … | |
|  | |
|  |  |
| A | 4Ω |
| B | 1Ω |
| C | 2Ω |
| D | 0.5Ω |

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| 72. | Consider the light bulbs shown below and choose the correct statement. | |
| **Light bulb A Light bulb B** | |
| A | Light bulb A is more expensive and gives dimmer light compared to light bulb B. |
| B | Light bulb A is more expensive and uses more electricity than light bulb B. |
| C | Light bulb A is less expensive and it is more energy efficient. |
| D | Light bulb A is less expensive and it is not energy efficient. |

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| 73. | Light bulbs A and B in question 72 are rated 100W and 11W respectively. They are used in an area where electricity costs R0.90/kWh. If both bulbs are switched on for four hours per day for 30 days then … | |
|  | |
| A | Bulb A consumes 12kWh and bulb B consumes 1.32 kWh of electricity per month. |
| B | Bulb A consumes 0.4kWh and bulb B consumes 0.04 kWh of electricity per month. |
| C | Bulb A consumes 0.9kWh and bulb B consumes 0.1kWh of electricity per month. |
| D | Bulb A consumes 10kWh and bulb B consumes 3 kWh of electricity per month |

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| 74. | Give a correct interpretation of an energy usage graph shown below. | |
|  | |
| A | Electricity and gas are equally used by both rich and poor people |
| B | Paraffin, firewood and gas are predominantly used by poor people |
| C | Gas is mainly used by rich people |
| D | Few people use firewood |

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| 75. | Which of the following can be used as an efficient energy source for cooking? | |
|  | |
| A | Electricity from a portable generator |
| B | Gas |
| C | Electricity from a solar cell |
| D | Electricity from a battery |

|  |  |  |
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| 76. | Consider the wooden house shown below and choose the correct statement. | |
|  | |
| A | Most heat transfer will take place through the walls because the surface area of walls is large. |
| B | Glass window panes are heat insulators |
| C | Most heat will escape through the roof because heat tends to flow upwards |
| D | Wooden walls are good insulators of heat |

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| 77. | 10g of ice at 00C is put into 500g of water at 200C. Which of the following statements is correct? | |
|  | |
| A | The temperature of ice will decrease. |
| B | The temperature of water will decrease. |
| C | The temperature of ice will remain the same. |
| D | The temperature of water will remain the same. |

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| 78. | An overloaded electric outlet shown below can cause serious electric danger due to the increase in the … | |
|  | |
| A | voltage in the supply circuit. |
| B | electric current in the supply circuit. |
| C | total resistance of the supply circuit. |
| D | static charge on the electric outlet. |

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| 79. | Which one of the following substances is an opaque material? | |
|  | |
| A | Blood |
| B | Urine |
| C | Saliva |
| D | Tears |

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| 80. | Which one of the following statements is correct about the formation of the rainbow as indicated in the figure below? | |
| **Formation of a rainbow** | |
| A | Refraction of light takes place at points P and dispersion of light takes place at point Q. |
| B | Reflection of light takes place at points R and refraction of light takes place at point Q. |
| C | Dispersion of light takes place at point R and reflection of light takes place at point Q. |
| D | The raindrop will not reflect light because it is transparent. |

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| 81. | Acid rain has negative environmental effects and can destroy plants and pollute water. Acid rain is a result of the reaction between | |
| A | Metals and water |
| B | Non-metals, air and acid |
| C | Metal oxides, metal hydroxide and acid |
| D | Non-metal oxides and water |

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| 82. | Which one of the following chemical reactions will form salt and water? | |
|  | |
| A | Acids + metal oxides |
| B | Acids + metal carbonates |
| C | Acids + non-metal + oxygen |
| D | Acid + metal |

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| --- | --- | --- |
| 83. | Which of the following chemical reactions will form hydrogen gas? | |
|  | |
| A | Acids + metal oxides |
| B | Acids + metal carbonates |
| C | Acid + metal hydroxide + oxygen |
| D | Acid + metal |

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| --- | --- | --- |
| 84. | The chemical reaction between an acid and a base is known as … | |
|  | |
| A | Oxidation |
| B | Reduction |
| C | Neutralization |
| D | Hydration |

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| --- | --- | --- |
| 85. | During rusting, the atoms forming a piece of steel are … | |
|  | |
| A | Oxidized |
| B | Reduced |
| C | Neutralised |
| D | Hydrolysed |

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| --- | --- | --- |
| 86. | When steel is exposed to moisture in air it rusts according to the following equation: | |
|  | |
| A | Fe + O2 → FeO2 |
| B | 2Fe + O2 → 2FeO2 |
| C | 4Fe + 3O2 → 2Fe2O3 |
| D | 4Fe + 2O2 → 2Fe2O2 |

***Use the following diagram to answer questions 87, 88, and 89.***

|  |  |  |
| --- | --- | --- |
| **A** | **B** | **C** |
| **E** | **F** | **G** |

|  |  |  |
| --- | --- | --- |
| 87. | Which organisms do **not** belong to the kingdom shown in the diagram? | |
|  | |
| A | Tree and mushroom |
| B | Human being and snake |
| C | Bird and snake |
| D | Human being and cockroach |

|  |  |  |
| --- | --- | --- |
| 88. | Since human beings do **not** have tails and walk on two legs they are classified as: | |
|  | |
| A | Mammal |
| B | Chordata |
| C | Hominids |
| D | Homo sapiens |

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| 89. | Which of these statements is correct? | |
|  | |
| A | The organism shown in A above is a monocotyledon angiosperm whose female sex organ is a flower. |
| B | The organism shown in A above is a dicotyledon angiosperm whose female sex organ is a flower. |
| C | The organism shown in D above is a plant whose sex organ is a spore. |
| D | The organism shown in F (cockroach) is an animal belonging to phyla anthropoda. |

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| 90. | Photosynthesis is a process in which green plants use energy from the sun to transform water, carbon dioxide, and minerals into oxygen and organic compounds. Sunlight is a portion of the electromagnetic radiation given off by the Sun, particularly infrared, visible, and ultraviolet light.  Which one of the visible colours of light is not required for photosynthesis to occur? | |
|  | |
| A | Red |
| B | Orange |
| C | Yellow |
| D | Green |

|  |  |  |
| --- | --- | --- |
| 91. | Human beings hear sounds of between… | |
|  | |
| A | 0 Hz to 200Hz |
| B | 20 Hz to 20 000Hz |
| C | 20Hz to 2000Hz |
| D | 2000Hz to 200kHz |

|  |  |  |
| --- | --- | --- |
| 92. | Which one of the following is **not** a temperature scale? | |
|  | |
| A | Fahrenheit |
| B | Celsius |
| C | Kelvin |
| D | Thermal |

|  |  |  |
| --- | --- | --- |
| 93. | Noise is measured in which of the following units? | |
|  | |
| A | Candela |
| B | Dioptres |
| C | Decibels |
| D | Hertz |

|  |  |  |
| --- | --- | --- |
| 94. | Bromine is a … | |
|  | |
| A | black solid |
| B | red liquid |
| C | colourless gas |
| D | highly inflammable gas |

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| --- | --- | --- |
| 95. | The property of a substance to absorb moisture from the air on exposure is called … | |
|  | |
| A | Osmosis |
| B | Deliquescence |
| C | Efflorescence |
| D | Desiccation |

|  |  |  |
| --- | --- | --- |
| 96. | Galvanised iron sheets have a coating of… | |
|  | |
| A | Lead |
| B | Chromium |
| C | Zinc |
| D | Tin |

|  |  |  |
| --- | --- | --- |
| 97. | The element common to all acids is… | |
|  | |
| A | Hydrogen |
| B | Carbon |
| C | Sulphur |
| D | Oxygen |

|  |  |  |
| --- | --- | --- |
| 98. | What is laughing gas? | |
|  | |
| A | Nitrous Oxide |
| B | Carbon monoxide |
| C | Sulphur dioxide |
| D | Hydrogen peroxide |

|  |  |  |
| --- | --- | --- |
| 99. | The filament of an electric bulb is made of… | |
|  | |
| A | Tungsten |
| B | Nichrome |
| C | Graphite |
| D | Iron |

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| --- | --- | --- |
| 100. | Which of the following is an element? | |
|  | |
| A | Ruby |
| B | Sapphire |
| C | Emerald |
| D | Diamond |

***The End***