



4th NATURAL SCIENCE OLYMPIAD

GRADE 7 TO 9

08 MAY 2014

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

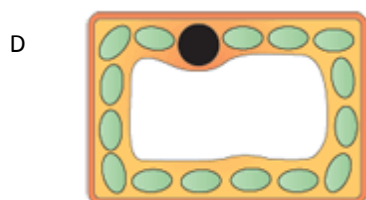
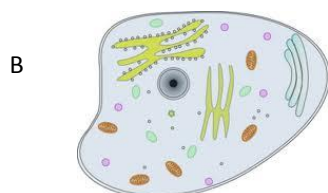
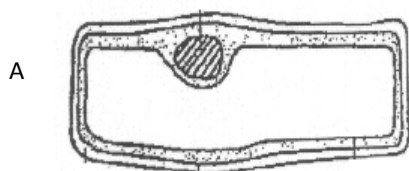
Do not fold the answer sheets.

Three hours are allowed to answer the questions

Natural Science Olympiad 2014

Grade 7 to 9

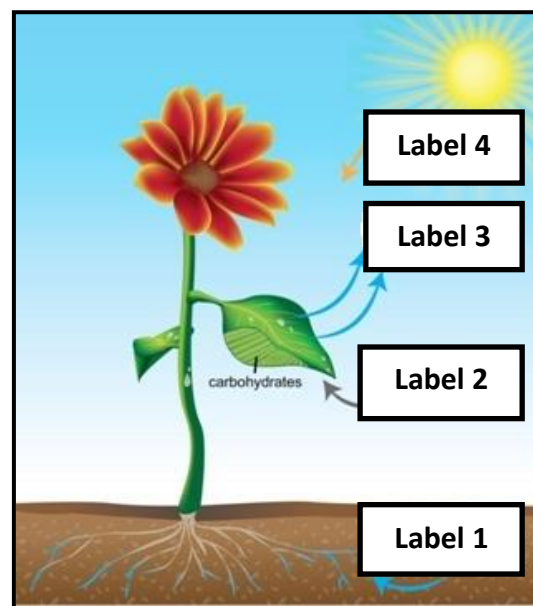
1. The cell diagrams below are derived from the contents of a salad bowl containing lettuce leaves, carrot, raw fish fillet and olive oil. Which statement below is correct?



- A A represents a cell from a carrot while B represents a cell from a lettuce leaf.
- B B represents a cell coming from a fish fillet, A represents a cell from a carrot and D represents a cell from a lettuce leaf.
- C C represents a cell coming from olive oil, D represents a cell from a carrot and A represents a cell from a fish fillet.
- D A represents a cell from a carrot, B represents a cell from the fish fillet and C represents a cell from the lettuce leaf.

2. The diagram below shows the process of photosynthesis. Which **one** of the following combinations of labels is **correct**?

| | Label 1 | Label 2 | Label 3 | Label 4 |
|---|----------------|----------------|----------------|---------|
| A | Water | oxygen | carbon dioxide | light |
| B | carbon dioxide | oxygen | water vapour | light |
| C | Oxygen | Water | carbon dioxide | light |
| D | Water | carbon dioxide | oxygen | light |



3. Which one of the following statements is not **100%** correct?

- A Oxygen in the air is removed by combustion and respiration.
- B Plants, animals and microorganisms make up the total diversity of the Earth.
- C Plants can grow in the hydrosphere and lithosphere.
- D Animals and plants are divided into kingdoms, which are then subdivided into phyla, then classes, then families, then orders, then genera and lastly into species.

4. Stem cells are mother cells that have the potential to become any type of cell in the body. One of the main characteristics of stem cells is their ability to self-renew or multiply while maintaining the potential to develop into other types of cells. Which one of the following statements is correct?

- A Stem cells can be used to re-create a rat which will differ completely from the donor.
- B Stem cells cannot be used in cloning animals.
- C Stem cells can be used to treat a wide range of diseases and chronic ailments.

D There are no ethical issues related to stem cell use.

5. Which one of these statements regarding living organisms is **not** correct?

- A A mushroom is an example of a plant.
- B TB is caused by a bacterium.
- C Living organisms are classified according to their shared characteristics.
- D Living organisms consist of bacteria, protista, fungi, plants and animals only.

6. Which statement below is correct?

- A Crabs, snails and fish are vertebrate animals.
- B Frogs, crabs and fish are invertebrate animals.
- C Fish and a frog are vertebrate animals.
- D Crabs and snails are not animals.

7. Consider plant A and plant B:



Plant A



Plant B

Which one of the following is correct?

- A Plant A is a monocotyledon angiosperm.
- B Plant B is a dicotyledonous angiosperm.
- C Plant A is a dicotyledonous gymnosperm.
- D Plant A is a dicotyledonous angiosperm and Plant B is a gymnosperm.

8. Which one of these is not a sexual organ from a living organism?

- A Flower
- B Penis
- C Vagina
- D Sperm

9. Which of these contain male cells from a living organism?

- A Sperm

- B Sepals
- C Stigma
- D Petals

10. Which one of the following statements is correct?

- A Male circumcision prevents HIV from entering a human body.
- B Contraceptives prevent the transmission of ALL sexually transmitted infections.
- C A condom prevents sperm from reaching the egg.
- D Only oral contraceptives prevent fertilisation.

11. Which of the following are classified as Homo sapiens?

- A An ape and a boy
- B A boy
- C A gorilla
- D All of the above

12. Which system in a human body can be affected by a stroke?

- A Digestive system
- B Circulatory system
- C Respiratory system
- D None of the above

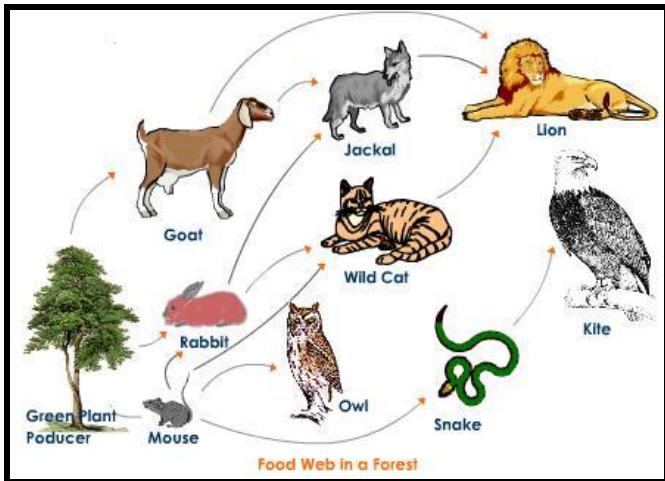
13. Which of the following series of processes do not affect the same body system of humans? The processes that you select should be taking place in the same human system.

- A Ingestion, digestion, absorption and diffusion.
- B Inhalation, exhalation, diffusion and cellular respiration.
- C Contraction, relaxation, locomotion and movement.
- D Filtration, absorption, secretion and excretion.

14. Which one of the visible colours of light is not required for photosynthesis to occur?

- A Red
- B Orange
- C Yellow
- D Green

15. Consider the following food web. A disease broke out that killed a large number of wild cats. Which of the responses A, B, C or D shows what happened to the populations of organisms thereafter?



| | Increased | Decreased |
|---|-----------|-----------|
| A | Rabbits | Mice |
| B | Mice | Lions |
| C | Snakes | Mice |
| D | Mice | Owls |

16. The incomplete table below shows how organisms are classified

| Kingdom |
|---------|
| Z |
| Class |
| Y |
| Family |
| X |
| Species |

What do the letters X, Y and Z represent?

| | X | Y | Z |
|---|----------|-------|--------|
| A | Order | Genus | Phylum |
| B | Organism | Order | Phylum |
| C | Genus | Order | Phylum |
| D | Phylum | Order | Genus |

17. 17 What is the smallest unit of life?

- A A cell
- B An atom
- C A molecule
- D An insect

18. Plants create their own food by absorbing and processing sunlight. The ability to produce your own food source is a metabolic process called ____

- A heterotrophy

- B autotrophy
- C homotrophy
- D self-metabolisation

19. Which of the following scientific classifications of the domestic dog is correct? In other words, which of the following is the proper way to name the domestic dog?

- A *Canis lupus Familiaris*
- B *Canis Lupus familiaris*
- C *Canis lupus familiaris*
- D *Familiariscanis lupus*

20. Fehling's solution is used to test for ____

- A starch
- B glucose
- C protein
- D mineral salts

21. The ____ are the "entrance rooms" at the top of the heart:

- A atria
- B auricles
- C ventricles
- D myocardia

22. ____ is the relaxation and filling phase of each heart chamber.

- A Diastole
- B Fibrillation
- C Systole
- D Bacterial endocarditis

23. When you inhale, the air pressure in the chest cavity ____

- A stays the same, allowing both pressures to be equalise.
- B increases, allowing lungs to expand.
- C decreases, allowing outside air to flow into the lungs.
- D there is no air pressure in your chest cavity.

24. Fracking, or hydraulic fracturing, is the process of fracturing rock by a pressurised liquid to extract natural gas from shale rock layers deep within the Earth. South Africa has a huge reserve of shale gas in the Karoo area which could benefit the economy of South Africa. Some people are opposed to

possible fracking in the Karoo because it is suspected that:

- A Fracking will not create jobs.
- B Fracking will pollute the air.
- C Fracking will badly affect water resources in the Karoo area.
- D Fracking might cause veld fires.

25. Natural gas is stored energy which originated from:

- A sedimentary rocks.
- B a mixture of air and oil.
- C once-living plants and animals.
- D wind and water.

26. The Road Management Corporation issued a statement of advice to parents not to carry children on them when travelling because the weight of a child can increase fivefold during an accident involving a moving vehicle. A person will not be able to hold onto a child if an accident happens.

- A The statement is correct because weight increases with an increase in the speed of an object.
- B The statement is not correct because weight decrease with an increase in the speed of an object.
- C The statement is not correct because weight does not change with a change in the speed of an object.
- D The statement is not correct because weight decrease with a decrease in the speed of an object.

27. Consider the following three houses. Determine which house will be cooler in summer and warmer in winter.



House A:
Wooden house



House B:
Corrugated iron house

House C: Stone house

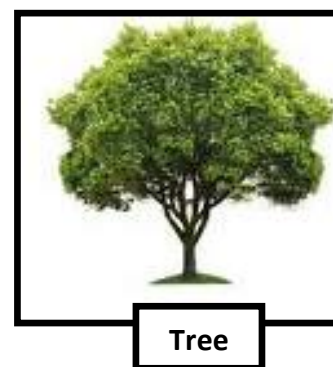


- A House A because wood is a good insulating material.
- B House B because corrugated iron is a good insulating material.
- C House C because stone is a good insulating material
- D All the houses will be cool in summer and warm in winter.

28. Which one of the following statements about a car travelling along a freeway is correct?

- A All chemical energy in petrol is converted to useful kinetic energy.
- B The output energy of the car is equal to the input energy.
- C Wasted energy is produced in the form of potential energy.
- D Sound energy produced by the car can be considered as wasted energy.

29. The best place to be in a lightning storm is?



Tree



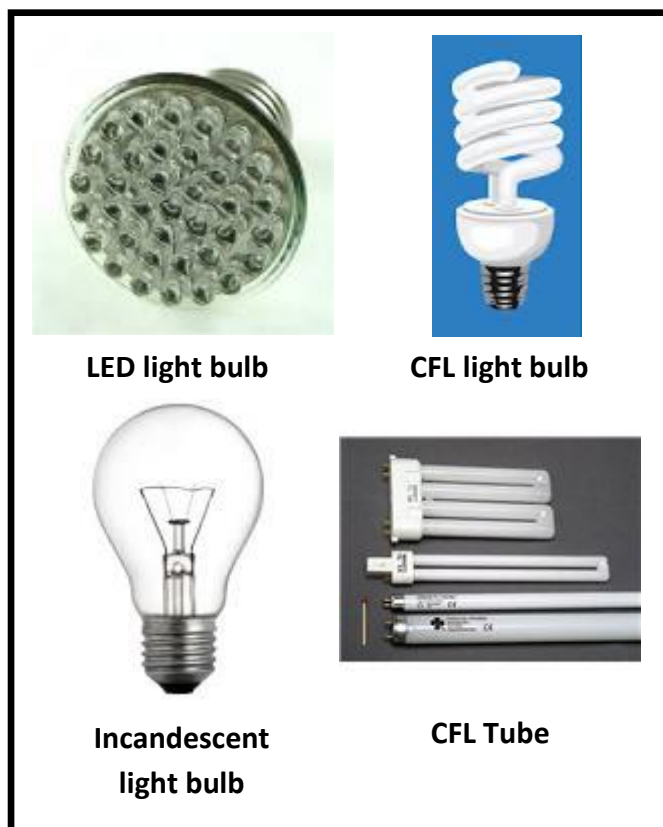
Shack



Tent

- A In an open field.
- B Under a tall tree.
- C In a shack made of corrugated iron.
- D In a tent.

30. Which one of the following light bulbs is the most energy efficient electric light source?

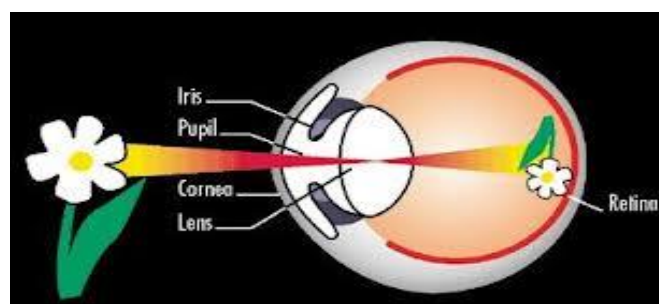


- A LED light bulb
- B CFL light bulb
- C Incandescent light bulb
- D CFL Tube

31. A house has three 100W incandescent light bulbs and ten 20W CFL light bulbs that are switched on for 730 hours per month. The cost of electricity is R3.89 per kWh. Which one of the following statements is true?

- A The monthly cost of electricity used by the ten CFL bulbs is equal to that used by the three incandescent bulbs.
- B The monthly cost of electricity used by the ten CFL bulbs is less than that used by the three incandescent bulbs.
- C Total energy used by all the bulbs in the house per month is 499kWh.
- D The total cost of electricity used by all bulbs per month is R153.61.

32. The figure below shows how an image of a flower is formed on the retina of a human eye. Which one of the following statements related to the formation on the image is correct?

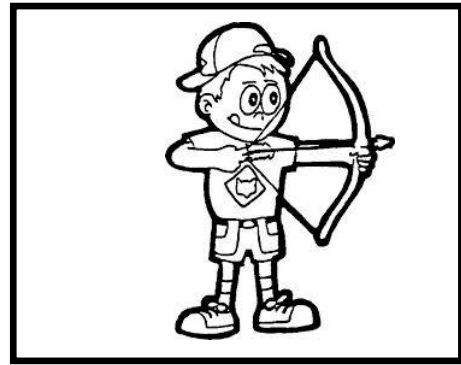
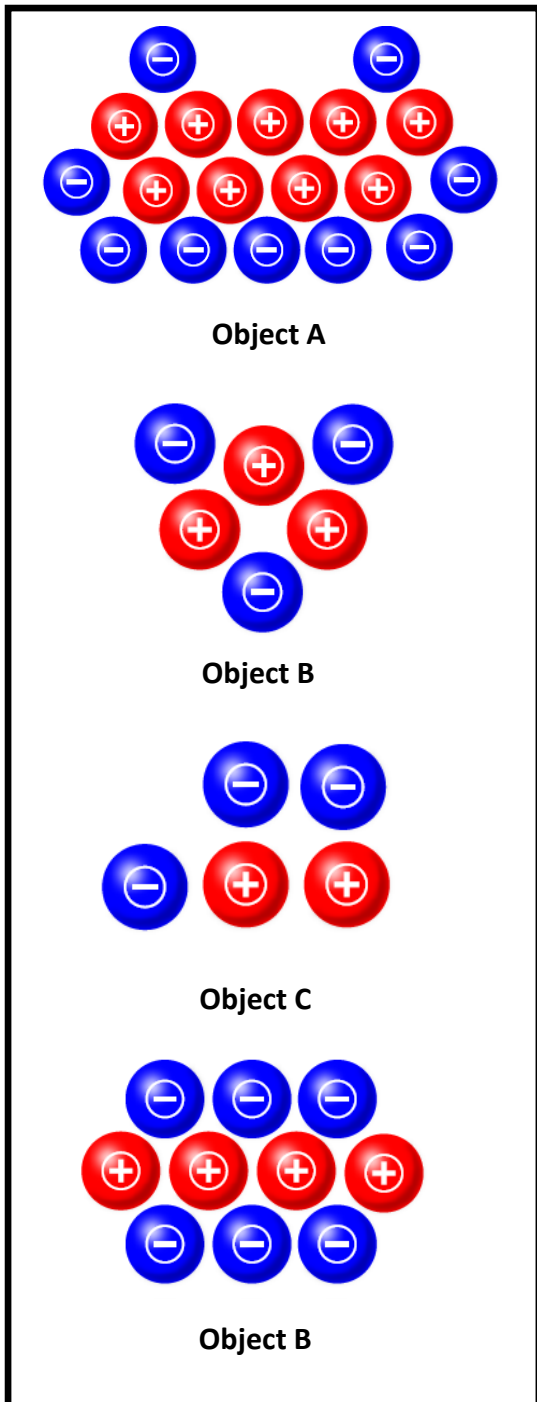


- A The flower is the source of light, the air between the flower and the eye is transparent, the cornea is transparent, the lens is transparent and the retina is opaque.
- B The flower reflects light, the air between the flower and the eye is transparent, the cornea is transparent, the lens is transparent and the retina is opaque.
- C The flower, the cornea and the retina are opaque materials.
- D The flower refracts light and the lens reflects light.

33. What makes renewable energy different from non-renewable energy?

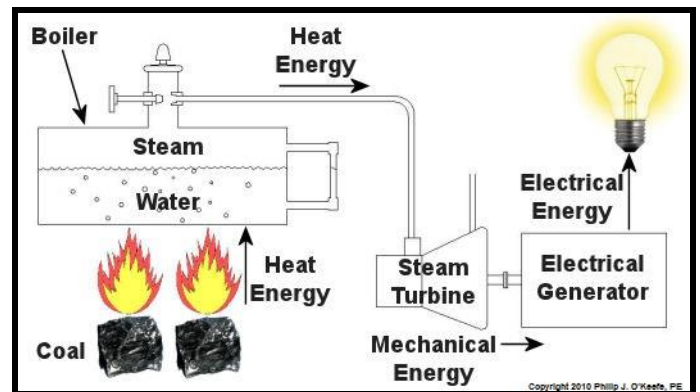
- A Renewable energy sources cannot be used over and over again.
- B Renewable energy comes from resources which are continuously replenished by nature.
- C Renewable energy cannot be replaced.
- D Renewable energy cannot be replaced by nature.

34. Consider the four charged objects in the figures below and choose the correct answer.



- A Kinetic
- B Chemical
- C Thermal
- D Potential

36. Consider all energy conversions taking place in the picture:



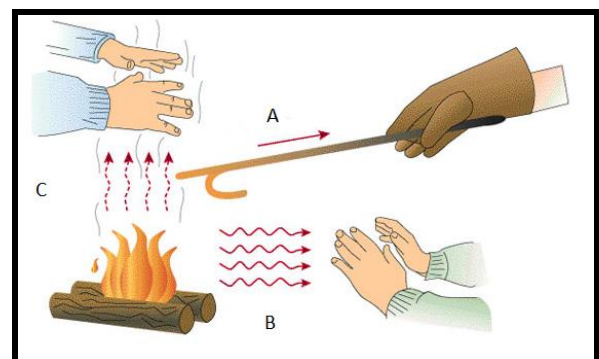
Which one of the following combinations of energy conversions, in the correct order, is taking place in the picture?

- A Thermal → Chemical → Kinetic → Light → Kinetic
- B Chemical → Thermal → Kinetic → Electrical → Light
- C Thermal → Kinetic → Potential → Electrical → Light
- D Chemical → Thermal → Electrical → Light → Heat

- A The total charge on object A is the same as the total charge on object D.
- B The total charge on object A is the more than total charge on object D.
- C Object C will be repelled by object D.
- D Object B is negatively charged.

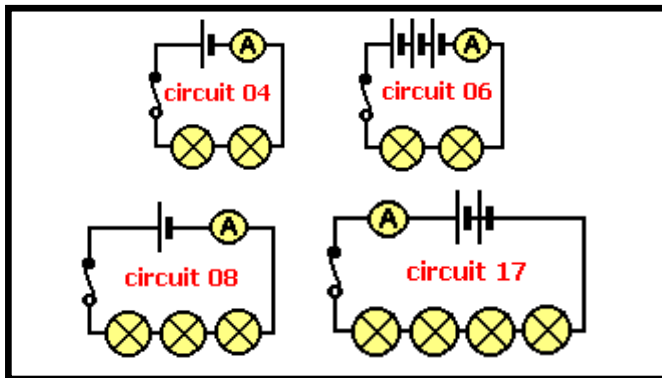
35. What form of energy does the bow have before the arrow is released?

37. Choose the correct method of heat transfer in A, B and C indicated in the diagram.



| | Method A | Method B | Method C |
|---|------------|------------|------------|
| A | Conduction | Radiation | Convection |
| B | Conduction | Convection | Radiation |
| C | Radiation | Convection | Conduction |
| D | Convection | Radiation | Conduction |

38. Which of the following circuits will have the same ammeter readings?



Note that all bulbs are identical and the all cells are identical.

- A circuits 08 and 04
- B circuits 04, 08 and 17
- C circuits 04 and 17
- D circuits 06 and 08

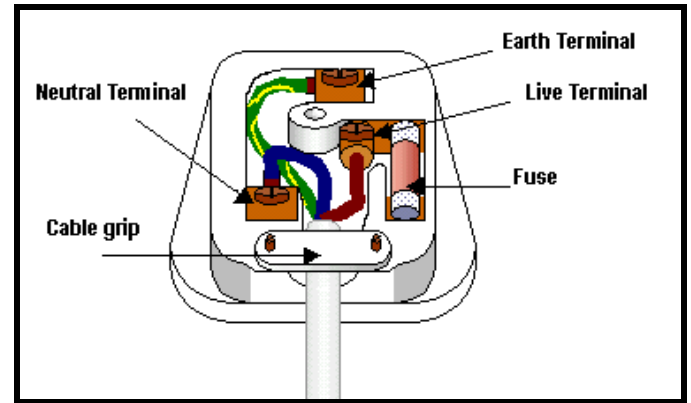
39. A dress appears red to the human eye because _____

- A the atoms making up the dress are red.
- B when white light shines on the dress, it absorbs red and reflects all other colours.
- C when white light shines on the dress; it absorbs all the other colours and reflects red.
- D red dresses absorb all colours of visible light.

40. The only Nuclear Power Plant in Africa is found at

- A Abuja, Nigeria
- B Cairo, Egypt
- C Addis-Ababa, Ethiopia
- D Koeberg, South Africa

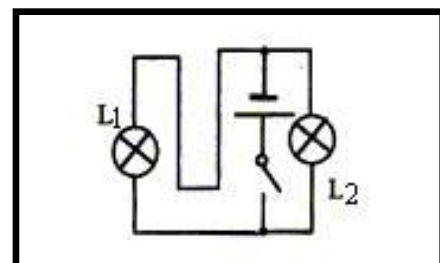
41. The diagram below shows a three pin-plug.



The purpose of the pin labelled **"Earth Terminal"** is to:

- A ensure that you do not get an electrical shock in case of a short circuit.
- B supply the electrical appliance with electrical power.
- C ensure you get an electrical shock if you don't put on rubber shoes.
- D increase the amount of electricity supplied to an appliance.

42. Choose the correct connection method for light bulbs L1 and L2 in the following circuit diagram:

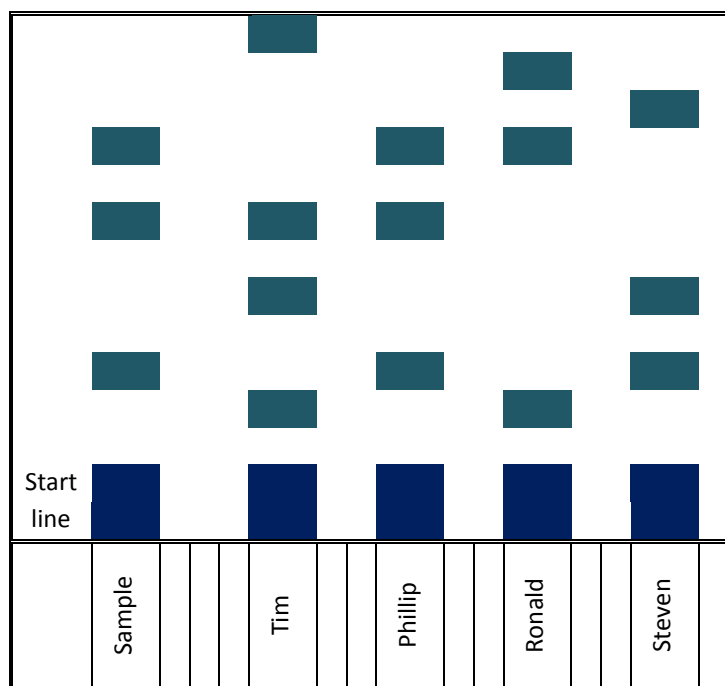


- A series
- B parallel
- C cannot make a judgment
- D wrong diagram

43. What is the basic difference between ultraviolet, visible, and infrared radiation?

- A half-life
- B temperature
- C wavelength
- D wave velocity

44. One of the employees at NFH Company fraudulently signed a delivery note from a delivery company that had delivered a consignment. The manager of NFH called the delivery company to enquire. The manager of the delivery company claimed, a certain employee of NFH signed and received the goods. Four men were at work during the time of delivery. Their names are Tim, Phillip, Ronald and Steve. All of them, when asked about the goods, denied knowledge of them. The signed document was sent to the laboratory to extract the ink pigment. At the same time pens used by the four NFH employees were seized from them and sent to the lab to be compared to the sample from the signed document. A modified chromatogram showing the result is given below.



Who amongst the gentlemen should the police pick up for questioning?

- A Tim
- B Phillip
- C Ronald
- D Steve

45. A sodium hydroxide solution is placed in a beaker. The probe from a pH-meter is then immersed in the solution. Which one of the following statements best explains how the reading on the pH meter varies as more and more hydrochloric acid is added.



- A The reading increases from 7 to around 14
- B The reading increases from 1 to around 14
- C The reading decreases from 13 to around 1
- D The reading decreases from 7 to around 1

46. A certain element has the following properties:

Good conductor of electricity, ductile, malleable, sonorous

Which one of the following represents the symbol of the element that best suits the description given above?

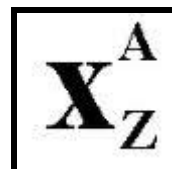
- A Br
- B Ne
- C H
- D Fe

47. Where on the periodic table are you likely to find the element whose properties are given below?

- Reacts violently with water.
- Conducts electricity.
- Good thermal conductor.
- Reacts spontaneously with oxygen.
- Burns in oxygen forming a powder that dissolves in water to form an alkaline solution.

- A s-block
- B p-block
- C d-block
- D f-block

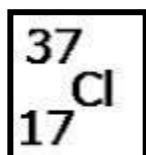
48. Which atom will behave exactly like atom X?



| | | | |
|--|---|---|-----|
| | A | Z | A-Z |
|--|---|---|-----|

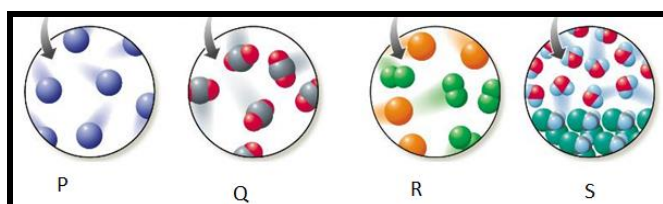
| Atom X | 23 | 11 | 12 |
|--------|----|----|----|
| A | 24 | 11 | 13 |
| B | 24 | 12 | 12 |
| C | 23 | 12 | 11 |
| D | 23 | 13 | 10 |

49. Which one of the following combinations gives the correct number of sub-atomic particles and the correct ionic charge for the element in the block?



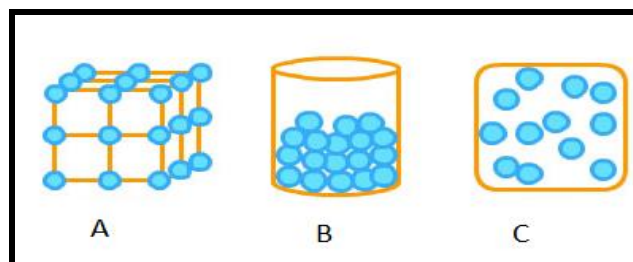
| | Proton | Electron | Neutron | Charge |
|---|--------|----------|---------|--------|
| A | 17 | 17 | 20 | -1 |
| B | 17 | 18 | 20 | -1 |
| C | 17 | 18 | 19 | 0 |
| D | 17 | 17 | 17 | 0 |

50. Which one of the following gives the correct description of the **substances** shown in the pictures below?



| | P | Q | R | S |
|---|----------|-----------------------|-----------------------|-----------------------|
| A | Element | Compound | Heterogeneous Mixture | Homogeneous Mixture |
| B | Compound | Homogeneous Mixture | Heterogeneous Mixture | Element |
| C | Element | Compound | Homogeneous Mixture | Heterogeneous Mixture |
| D | Element | Heterogeneous Mixture | Homogeneous Mixture | Compound |

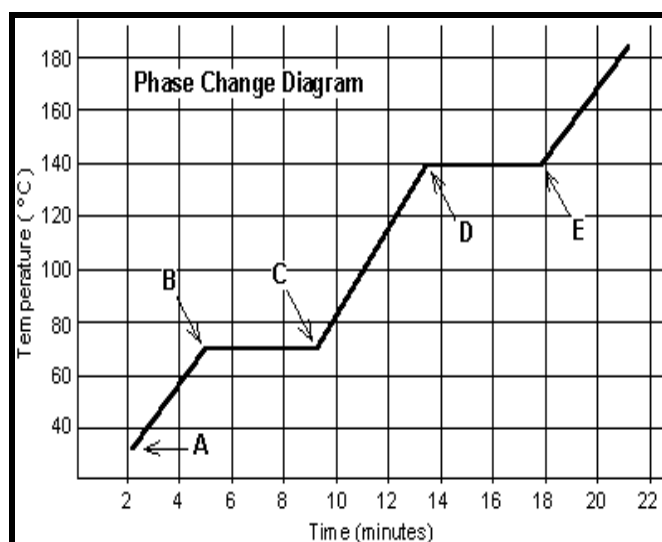
51. What is the phase change of matter called when matter changes state from C directly to A?



- A Solidification
B Freezing
C Deposition
D Gasification

52. An unknown solid was gently heated in a container. The change in temperature was recorded for a period of 22 minutes.

A graph of temperature against time (phase change diagram) was then plotted as shown below:



Which state(s) of matter was (were) present in the container after 6 minutes of heating?

- A Solid
B Solid and gas
C Liquid
D Solid and liquid

53. At a temperature of 60°C the substance in question 9 would be ____

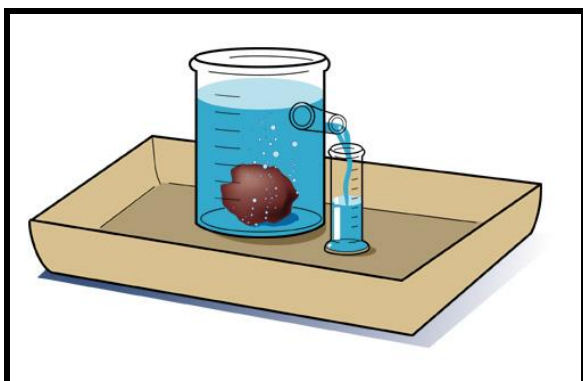
- A a liquid.
B a gas.
C a mixture of a solid and a liquid.
D a solid.

54. Hydrochloric acid reacted with marble chips (CaCO_3).

The three products that form during the reaction are...

| | Products | | |
|---|-------------------|-------------------|----------------|
| A | Calcium oxide | Hydrogen chloride | Water |
| B | Calcium hydroxide | Chlorine | Hydrogen |
| C | Calcium hydroxide | Carbon dioxide | Water |
| D | Calcium Chloride | Water | Carbon dioxide |

55. The apparatus below can be used to.....



- A measure the volume of a regular shaped water-soluble solid.
- B measure the solubility of any object.
- C measure the volume of an irregular shaped, insoluble solid.
- D measure how much water is absorbed by the solid immersed in water.

56. Which of the following metals forms an amalgam with other metals?

- A Tin
- B Mercury
- C Lead
- D Zinc

57. The hardest substance available on Earth is made up of _____ atoms.

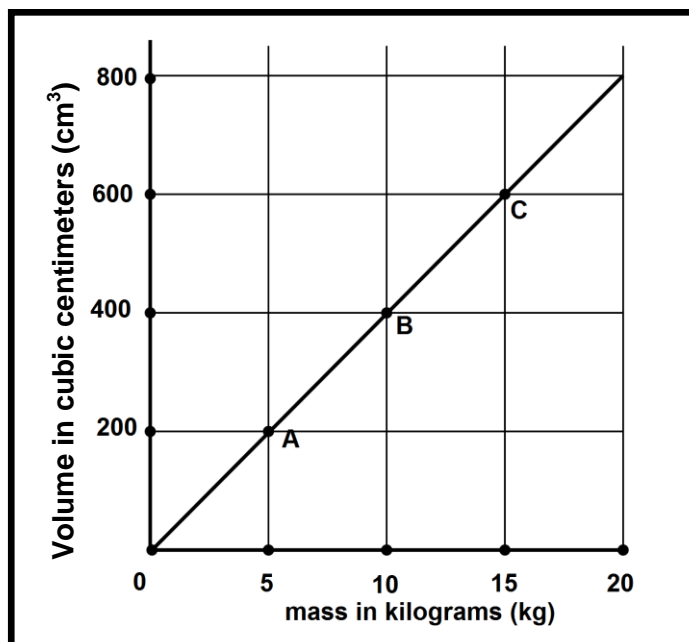
- A gold

- B Iron
- C Carbon
- D Platinum

58. Which one of the following gases is commonly known as "laughing gas"?

- A Nitrous oxide
- B Carbon monoxide
- C Sulphur dioxide
- D Hydrogen peroxide

59. The graph below shows the relationship between mass and volume for three samples, A, B, and C, of a given material. What is the density of this material?



- A 1.0 g/cm^3
- B 5.0 g/cm^3
- C 40.0 g/cm^3
- D 25.0 g/cm^3

60. Which one of the following statements is not correct?

- A While water freezes its temperature does not change.
- B While water boils its temperature does not change.
- C When water in the liquid phase starts to freeze its density will increase.
- D When water in the liquid phase starts to boil its density will decrease.

61. Air consists of:

- A 78% Nitrogen, 20.9% Oxygen, 0.9% Argon, 0.03% Carbon dioxide
- B 78% Oxygen, 20.9% Nitrogen, 0.9% Carbon dioxide and 0.03% Argon
- A 78% Nitrogen, 0.9% Oxygen, 20.9% Argon, 0.03% Carbon dioxide
- D 78% Oxygen, 20.9% Nitrogen, 0.9% Carbon dioxide and 0.03% Argon

62. Which one of the following waste products should NOT be recycled?

- A Garden waste
- B Metals
- C Medical waste
- D Plastic containers

63. Which one of the following is NOT a negative consequence associated with poor waste management?

- A Pollution of the environment
- B Diseases
- C Blockage of sewers and water drainage systems
- D Soil erosion

64. The wrought iron gate in the picture below will rust if exposed to...



- A Wind and heat.
- B Moisture, heat and light.
- C Oxygen and moisture.
- D Oxygen, heat and light.

65. Which one of the following separation methods involves two phase changes?

- A Filtration
- B Evaporation
- C Distillation

D Chromatography

66. CaCO_3 (lime) is applied to the soil when planting potatoes. This will make the soil ...

- A more acidic.
- B less acidic.
- C more alkaline.
- D to retain water better.

67. Which statement is true about the following alkali metals?

- Lithium
- Sodium
- Potassium

- A They have low boiling points.
- B They are shiny when freshly cut.
- C They are very hard.
- D They have a nice smell.

68. Which colour combination of light produces the colour white?

- A Green and blue.
- B Red, green and blue.
- C Blue, red and black.
- D Red, green and yellow.

69. Days are longer in summer than in winter because:

- A Solar energy is more intense in summer than in winter.
- B Solar energy falls more directly over a smaller area in winter than in summer.
- C The Earth is closer to the Sun during summer.
- D The tilt in the Earth's axis does not change as the Earth orbits around the Sun.

70. Which one of the following statements is **not true** regarding solar energy?

- A Solar energy sustains life on Earth.
- B Coal and crude oil store energy from the Sun that was absorbed by plants millions of years ago.
- C Solar energy consists of heat from the Sun.
- D Solar energy is a renewable energy resource.

71. Astronauts weigh more on Earth than they do on the Moon because

- A they have less mass on the Moon.
- B their density decreases on the Moon.
- C the Moon has less gravity than Earth.
- D the Moon has less friction than Earth.

72. Which activity **can** take place in the lithosphere?

- A Space exploration
- B Maize planting
- C Hake Fishing
- D Sky diving

73. _____ is the largest optical telescope in Africa?

SALT



HESS



SKA



MeerKAT



- A SKA
- B SALT
- C HESS
- D MeerKAT

74. The reason why the Karoo region in South Africa is the perfect location for the Square Kilometer Array (SKA) telescopes is:

- A The Karoo is a hot and dry area.
- B The Karoo is situated at a very high altitude.
- C There is insignificant air pollution in the Karoo.
- D The Karoo is very cold.

75. Which one of the following statements regarding planet Earth is **incorrect**?

- A Earth is the third planet from the Sun.
- B Earth is smaller than Jupiter.
- C Earth is the only planet in the Universe that is known to support life.
- D All life on Earth depends on the availability of oxygen, water and light.

76. Which one of the following statements is correct regarding the Milky Way Galaxy?



- A The Milky Way Galaxy contains more than 100 billion stars and more than 100 billion planets.
- B The Sun is located at the centre of the Milky Way Galaxy.
- C The Milky Way Galaxy is part of our Solar System.
- D The Milky Way Galaxy is the biggest galaxy in the Universe.

77. Which one of the following countries is responsible for the most pollution on Earth?

- A South Africa
- B United States of America
- C India
- D China

78. The water in South Africa is polluted, mostly by?

- A Agricultural activities
- B Sewage
- C Mining activities
- D Industrial activities

79. What percentage of the Earth's water can be considered as fresh water?

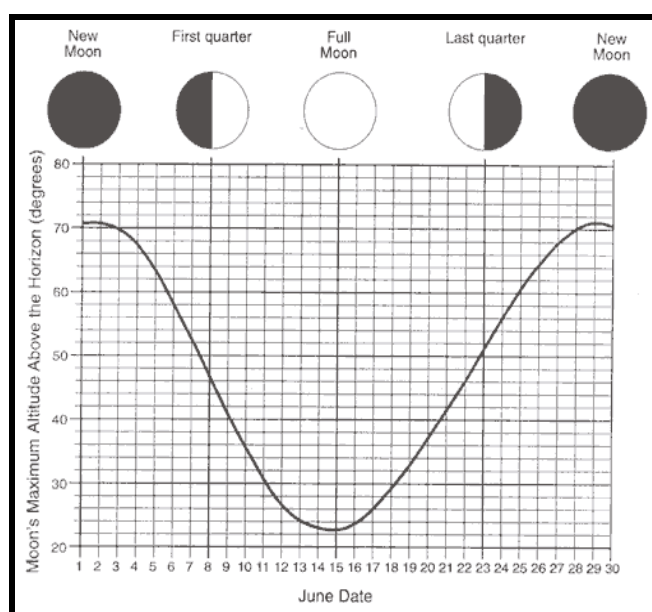
- A 50%

- B 22%
- C 7.5%
- D 2.5%

80. Which one of the following statements is true about sedimentary rocks?

- A They are usually non-porous.
- B They usually consist of relative large grains.
- C They usually consist of layers called magma.
- D They never contain fossils.

81. The graph below shows the maximum altitude of the Moon, measured by an observer during June in a particular year. The names and appearance of the four major Moon phases are shown at the top of the graph, directly above the date on which the phase occurred. What was the maximum altitude of the Moon on the 22nd of June?



- A 40°
- B 43°
- C 46°
- D 50°

82. Which phase of the Moon is visible in-between Last Quarter and New Moon?

- A Waxing Gibbous
- B Waning Gibbous
- C Full Moon
- D Waning Crescent

83. A solar eclipse is exactly the same phenomenon as

- A phases of the Moon.
- B a solar wind.
- C summer solstice.
- D none of the above.

84. Global climate change is attributed to an atmospheric increase in _____ and _____ gas.

- A Oxygen, Hydrogen
- B Ozone, Methane
- C Nitrous oxide, Sulphur dioxide
- D Methane, Carbon dioxide

85. Why does the Moon appear to shine in the night sky?

- A The Moon emits its own light.
- B The Moon reflects the Sun's light.
- C The Moon lights up when it becomes dark.
- D The Moon reflects the Earth's light.

86. Which one of the following is the closest star to the Earth?

- A Proxima Centauri
- B Alpha Centauri (binary star)
- C Sun
- D Barnard's star

87. Which one of the following is the correct order of the Earth's atmospheric layers from the lowest to the highest layer.

- A Stratosphere, Mesosphere, Troposphere, Thermosphere, Exosphere.
- B Stratosphere, Troposphere, Mesosphere, Thermosphere, Exosphere.
- C Stratosphere, Troposphere, Thermosphere, Mesosphere, Exosphere.
- D Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere.

88. Stars in the night sky appear to have different colours. Which colour star is the hottest?

- A red
- B white
- C blue
- D yellow

89. When a new star is born, it is known as a ...

- A red giant
- B nebula
- C supernova
- D white dwarf

90. _____ by means of nuclear fusion in our Sun?

- A Lithium turns into Beryllium
- B Helium turns into Hydrogen
- C Hydrogen turns into Helium
- D Carbon turns into Nitrogen

91. One Astronomical Unit (AU) is equal to _____

- A the distance between two solar systems.
- B the diameter of the Sun.
- C the distance between the Earth and the Sun.
- D the diameter of our Solar system.

92. Which one of the following planets has the highest surface temperature?

- A Mars
- B Mercury
- C Earth
- D Venus

93. Which one of the following planets has a distinctive red appearance?

- A Mars
- B Venus
- C Jupiter
- D Neptune

94. Which planet in our solar system has the most complex ring system?

- A Uranus
- B Neptune
- C Saturn
- D Jupiter

95. The length of an Earth day is determined by the time required for approximately one_____

- A Earth rotation.
- B Earth revolution.
- C Sun rotation.
- D Sun revolution.

96. Which one of the following statements related to scientific models is **false**?

- A They are testable by observations.
- B They are aesthetically pleasing by the standards of the present time.
- C They use physical ideas to explain phenomena.
- D They do not change in the light of new observations.

97. If a theory is challenged by new evidence, which of the following could occur?

- A The theory could be altered.
- B The theory is accepted, not the evidence.
- C The evidence is wrong.
- D A vote is taken on whether to accept the new evidence.

98. AIDS is an example of a(n)

- A endemic disease
- B epidemic
- C outbreak
- D pandemic

99. Who discovered Penicillin?

- A Alexander Fleming
- B Sir Isaac Newton
- C Heinrich Hertz
- D James Joule

100. Who invented the BALLPOINT PEN?

- A Biro Brothers
- B Waterman Brothers
- C Bic Brothers
- D Write Brothers

The End