FIRST TERM MARKING SCHEME

SUBJECT: INTEGRATED SCIENCE

CLASS: JHS 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. B | 6. B | 11. C | 16. D | 21. D | 26. B | 31. B | 36. A |
| 2. B | 7. A | 12. A | 17. A | 22. D | 27. B | 32. D | 37. D |
| 3. D | 8. D | 13. C | 18. B | 23. B | 28. C | 33. B | 38. B |
| 4. C | 9. C | 14. B | 19. A | 24. D | 29. B | 34. D | 39. B |
| 5. B | 10. B | 15. D | 20. A | 25. D | 30. D | 35. B | 40. D |

SECTION B

1. (a) (i) A – solid B – Gas C – Liquid [3 marks]

(ii)

|  |  |
| --- | --- |
| Solid | Gas |
| 1. The particles are closely packed. | 1. The particles are widely separated |
| 2. There is a strong force of attraction between its particles | There is a negligible force of attraction between its molecules |

[3 marks]

(iii) A [2 nark]

(iv) Because its molecules are closely parked. [1 marks]

(v) Water, cooking, oil, ink, milk, palm oil, petrol, paint, honey an two =[2 marks]

(b) (i) I – bottle (glass) II. Beaker III – bubbles [3 marks]

(ii) - To demonstrate the presence of air in empty bottle.

(iii) It would be observed that there are bubbled coming out off empty through the water.

[2 marks]

(iv) The bubble indicate the presence of air in an empty bottle [3 marks]

(c) (i) Animal cell [2 marks]

(ii) I – Nucleus II – Golgi bodies or bottle

III – Vacuble IV – Mitochondrion

V. – cell membrane [5 marks]

(iii) IV – mitochondrion [1 mark]

(iv) It protect from injuries [1 marks]

(vii) I – Nucleus [1 marks]

(d) (i) I – batteries II – Switch/key III - P. N. junction diode IV - LED

[4 marks]

(ii) Switch/key [2 marks]

(iii) The LED would light up because current flow through it. [2 marks]

(iv) forward bias [2 marks]

2. (a) (i) Material is a matter that is manipulated in making something. [2 marks]

(ii)

|  |  |  |
| --- | --- | --- |
| Liquids | Solids | Gas |
| Lemon juice | Word | Oxygen |
| Vinegar | Sand | Water vapour |
| Palm wine | Soap | Carbon dioxide |

[3 marks]

(iii) Because its particles are closely packed giving rise to its compact nature [3 marks]

(iv) Because its particles are free to move about independently. [3 marks]

(v) - It helps to prevent overall dehydration - It helps to prevent constipation

- It helps keep the skin bright - It helps in nutrient absorption

- It improves blood oxygen circulation

- It helps fight off illness eg. urinary tract infections. [any four for 4 marks]

3. (a) (i) Element is a chemical substance that consist of atoms of only one kind. [2 marks]

(ii)

|  |  |
| --- | --- |
| Element | Symbols |
| Lithium | Li |
| Beryllium | Be |
| Oxygen | O |
| Sodium | Na |
| Argon | Ar |
| Potassium | K |

[3 marks]

(b) (i) - It is used to keep food from spoiling during transportation

- It is used to preserve human being until the time for the funeral.

- It is used I broken/damaged freezers to keep its content cold.

- It is used to remove oxygen from flammable tanks when placed inside. [2 marks]

(ii) Because solid particles cannot be move about freely but liquid’s particles do. [3 marks]

(c) - Neon - Helium - Argon [2 marks]

(d) Period is the horizontal arrangement of elements in the periodic table while the group is the vertical arrangement of elements in the periodic table. [3 marks]

4. (a) (i) Metals are element that donate elements in a chemical reaction. [2 marks]

(ii) - Good conductors off heat - Have light melting point

- Have high density - Are malleable - Are ductile [any 2 = 2 marks]

(b) (i) Semi-metals are element that have both properties off metals and non-metals [2 marks]

(ii) Because they can be beaten into any shape [2 marks]

(c) (i) Prokaryotic cell is a cell that does not have nucleus but Eukaryoti cell is a cell that have nucleus and membrane-corred organelles [3 marks]

(ii) Bacteria cell [1 mark]

(d) - organic fertilizer - Inorganic fertilizer [3 marks]

5. (a) (i) Hydrological cycle is the process off continuous movement off water within the earth and atmosphere. [2 marks]

(ii) - Evaporation - Condensation - Precipitation - Collection [4 marks]

(b) - Egg - Larva - Pupa - Adult [4 marks]

(c) - Elimination of flies breeding sites

- Redaction off sources that attract flies from other areas

- Prevention of contact with flies and diseasing causing germs. [any 2 = 2 marks]

(d) - They grow and mature quickly - They eat plant-based diet

- They breed easily in captivity [3 marks]

6. (a) (i) Enteric infection is an infection caused by microorganism such as virtuous, bacterial and parasites that cause intestinal illness. [2 marks]

(ii) - Nuisance in the environment - Transfer of pathogens

- Promote food poisoning [any 2 = 2 marks]

(b) (i) Crop nutrient is a substance used by an organism to grow, survive and reproduce. [2 marks]

(ii) - Compost - Green manures - farm dropping - fish meal [any 2 = 2 marks]

(c) (i) Broadcasting is the application of fertilizer uniformly over a piece of land either by hand or by machine before planting or at the time of planting . [3 marks]

(ii) - They contain few nutrients - They improves the structure of the soil

- They do not check erosion. [any 2 = 2 marks]

(d) Cud-chewing is an adaption that enables many hoofed mammals to break down that cellulose of plant cell walls into nutrients before they can absorb them. [2 marks]

FIRST TERM MARKING SCHEME

SUBJECT: INTEGRATED SCIENCE

CLASS: JHS 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. D | 6. B | 11. C | 16. B | 21. A | 26. B | 31. B | 36. A |
| 2. B | 7. D | 12. C | 17. A | 22. A | 27. A | 32. B | 37. B |
| 3. A | 8. B | 13. A | 18. B | 23. A | 28. B | 33. B | 38. A |
| 4. B | 9. C | 14. C | 19. C | 24. D | 29. B | 34. C | 39. A |
| 5. D | 10. C | 15. C | 20. D | 25. D | 30. C | 35. C | 40. C |

SECTION B

1. (a) (i) A – Motors with flat surfaces with cusps B – Incisor with chisel shaped

C – Canine with conical and sharply pointed. [3 marks]

(ii) I – crown II – root [4 marks]

(iii) A – for crushing and grinding food B – for cutting food

C – for tearing [3 marks]

(b) (i) I – retort stand II – thermometer III – Condenser/water jacket

IV – Distillate/clean water [4 marks]

(ii) Distillation [1 mark]

(iii) II – is check the temperature III – To cool the water vapour [2 marks]

(iv) - Evaporation - Condensation - Crystallisation [3 marks]

(c) (i) I – egg II – Larva III – pupa IV – Imago/Adult [4 marks]

(ii) It came out to the surface and obtain oxygen through the horn-like called siphon. [2 marks]

(iii) - Use of tilapia to feed on them - Use of mosquito fishes. [2 marks]

(iv) - Use of insecticide spray - spraying kerosene on the surface of stagnant water.

[2 marks]

(d) (i) A – raised bed B – Sunken bed [1 mark]

(ii) - It is easier to reach when doing had operations such as weeding and thinning

- Much better drainage

- It warm up more quickly. [3 marks]

(iii) - Carrots, tomatoes

- Onions, okra

- garlic, sweet potatoes [3 marks]

(iv) - Maize, tomatoes, egg plant

- Sorghum, cucumber

- beans, pepper [3 marks]

2. (a) (i) Mixtures are physical combination of two or more elements. [2 marks]

(ii) - toothpaste - Paint - smoke [3 marks]

(b) (i) Subatomic particles are three tiny particles of atom. [2 marks]

(ii) Particles charges

Proton +1

Electron -1

Neutron 0 [3marks]

(c) (i) Atomic number is the number off protons in the nucleus of an atom. [2 marks]

(ii)

|  |  |
| --- | --- |
| 1. Positively charged particles | 1. Negatively charged particle |
| 2. Located in the nucleus | 2. Located outside the nucleus |
| 3. It fixed and stationary in the nucleus | 3. It moves in the shells of atom [2 marks] |

(d) 19 [1 mark]

3. (a) (i) Electron configuration is the arrangement of electrons in the shell of an atom. [2 marks]

(ii) electrons

shell

nucleus [3 marks]

(b) (i) An ion is an atom or group of atoms that carry an electrical charge OR An ion is an atom who gained or loses electrons [2 marks]

(ii) - cation - anion [2 marks]

(c) Atoms are electrically neutral when both charged cancelled out. [3 marks]

(d) (i) Eukaryotic cell is a type of cell that have nucleus and membrane-covered organelles.

[2 marks]

(ii) - xylem cell, virus cell [2 marks]

- phloem cell [2 marks]

4. (a) (α) Solute is a substance that dissolves in a solvent to form a solution. [2 marks]

(β) Solvent is a substance that dissolves a solute to form a solution. [2 marks]

(γ) Solution is formed from the uniform mixture of a solute and a solvent. [2 marks]

(b) (i) Homogenous mixture is a mixture in which the components are completely and evenly mixed with one other while Heterogenuous mixture is a mixture in which the components are unevenly mixed. [2 marks]

(ii) - muddy water - milk of magnesia - aluminium trisilicate

- mixture of oil and water [any two – 2 marks]

(c) 1. Add water to the mixture of sand and salt to dissolve the salt

2. Filter the salt solution

3. Carry out evaporation [3 marks]

(d) Emulsion is a mixture of two immiscible substances. [2 marks]

5. (a) (i) Carbon cycle is the process through which carbon is cycled through the air, ground, plants, animals and fossil fuels. [2 marks]

(ii) 1. Through decay or decomposition 2. Through burning or combustion [2 marks]

(b) (i) Global warming is the increase in the temperature of the atmosphere surrounding the earth’s surface. [2 marks]

(ii) 1. Increase in atmospheric temperature 2. Meeting of ice bergs

3. rise in sea level 4 Increase in incidence of disease [any two – 2 marks]

(c) 1. Draining swamps 2. Disposing unwanted containers

3. Clearing grasses around your houses [3 marks]

(d) Is formed when the food residues get stuck on the teeth and in the corners of the teeth forming a hard layer of dirt. [2 marks]

6. (a) (i) 1. Crown 2. Neck 3. Root [3 marks]

(ii) 1. Calcium 2. Potassium 3. Magnesium [3 marks]

(b) (i) Seedbed is a place where seeds germinate and get nourishment and support through their roots. [2 marks]

(ii) 1. Fine and granular surface soil 2. Free from weeds

3. retains adequate moisture [any two – 2 marks]

(c) (α) Hay is dry forage which is conserved for use by livestock in the future. [2 marks]

(β) Silage is fresh green forage conserved by partial fermentation [2 marks]

(d)

|  |  |
| --- | --- |
| Hay | Silage |
| 1. Low moisture content | 1. High moisture contents |
| 2. Dry, dusty and less green | 2. Wet and green |
| 3. Less palatable | 3. Highly palatable |

[any one – 1 marks]

FIRST TERM MARKING SCHEME

SUBJECT: INTEGRATED SCIENCE

CLASS: JHS 3

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. C | 6. B | 11. A | 16. B | 21. D | 26. D | 31. C | 36. C |
| 2. B | 7. B | 12. C | 17. D | 22. C | 27. B | 32. C | 37. C |
| 3. A | 8. C | 13. B | 18. A | 23. D | 28. A | 33. B | 38. C |
| 4. D | 9. B | 14. A | 19. A | 24. D | 29. B | 34. A | 39. D |
| 5. B | 10. C | 15. B | 20. C | 25. C | 30. B | 35. C | 40. D |

SECTION B

1. (a) (i) 40cc [2 marks]

(ii) Neutralization reaction [3 marks]

(iii) NaCl solution/salt solution/Brine [2 marks]

(iv) Solid NaCl is formed/water evaporations leaving solid NaCl [3 marks]

(b) (i) I – thread/rope II – Muslin bag III – Conical flask

IV – Cork [4 marks]

(ii) IV – Prevent oxygen from dissolving into the flask. [1 mark]

(iii) To kill the living organisms in it. [1 marks]

(iv) X – the line water turns milky Y – The lime water remains the same. [2 marks]

(v) Because flask X contains carbon dioxide while flask Y didn’t. [2 marks]

(c) (i) A – Resistor B – Capacitor C – LED D – Inductor

E – PNP transistor [5 marks]

(ii) A – To control current entering another component B – To store charge

C – To give off light [3 marks]

(iii) Key / Switch [2 marks]

(d) (i) A – Glucose / Simple sugar / Reducing sugar B - Starch

C – Oil/fat/lipid [3 marks]

(ii) A – Glucose B – Glucose C – Fatty acids and glycerol [3 marks]

(iii) Small intestine (Ileum) [4 marks]

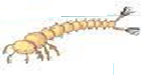


2. (a) (i)

Imago



Egg



[3 marks]

Larva

Pupa

(ii) 1. Chemical method 2. Environmental method 3. Biological method

4. Genetic method [any 2 = 2 marks]

(b) (i) 1. Mulching, cover cropping 2. Crops rotation, Green manuring

3. Terracing, mixed cropping [any 3 = 3 marks]

(ii) (α) Ion (II) sulphide (β) Sulphur oxide

(γ) Carbon dioxide / carbon (IV) oxide [3 marks]

(c) 1. Tomatoes 2. Yam [2 marks]

(d) Acid is any substance that produce hydrogen ion when dissolved in water. [2 marks]

3. (a) (i) Digestion is the process whereby complex food substances taken in are broken down by enzymes into simple soluble and absorbable forms in the body. [2 marks]

(ii) 1. Eating too fast 2. Overeating 3. Lack of roughage

4. sleeping immediately after heavy meal. [any 2 = 2 marks]

(b) (i) 1. Changes the states of matter 2. Causes deduction of substance [2 marks]

(ii) 1. Causes substance to melt 2. Causes substance to flame up

3. Causes substance to become hot [any 2 = 2 marks]

(c) (i) O2- (ii) Ca2+ (iii) Fe2+  [3 marks]

(d) (i) Palm oil (ii) Milk (iii) Unripe Lemon /grape fruit

(iv) Grapes [4 marks]

4. (a) (i) Water conservation is any beneficial reduction in water loss, use or waste. [2 marks]

(ii) 1. Clearing forest along river banks 2. Surface mining activities

3. Use of chemicals for fishing 4. Over use of fertilizers [2 marks]

(b) (i) Because the chemicals pollute the environment. [3 marks]

(ii) 1. Mosquitoes are controlled without polluting the environment.

2. It does not require a lot of physical work. [2 marks]

(c) (i) Galaxy is made up of star, space, dust and gas OR Galaxy is a large group many stars in the universe. [2 marks]

(ii) 1. The earth receives all its energy from the sun’s radiation.

2. The sun’s gravity keeps the earth in orbit around the sun.

3. The sun has the most dominating influence on the changing climate of various locations on earth at different times of the year. [any 2 = 2 marks]

(d) Gum disease is an infection of the tissues and bones that surround and support the teeth. [2 marks]

5. (a) (i) Roughage is an indigestible fibrous material which is mainly cellulose. [2 marks]

(ii) Because is provide bilk fibre that aids digestion and enhancing free movement, preventing constipation. [2 marks]

(b)

|  |  |
| --- | --- |
| Water | Steam |
| 1. It is a liquid | 1. It is a gas |
| 2. It can be seen | 2. It cannot be seen |
| 3. Exists below 1000C | 3. It exists at 1000C and above |
| 4. It evaporates into steam | 4. It condenses into water. [4 marks] |

(c) (i) Plaque is formed when the food residues get stuck on the teeth and in the corners of the teeth forming a hard layer of dirt. [2 marks]

(ii) 1. Removal of the tooth by a deafest

2. Filling the cavities created on the tooth. [2 marks]

(d) 1. Emitter 2. Base 3. Collector [3 marks]

6. (a) (i) Base is a substance that produces hydroxide ion when dissolve in water. [2 marks]

(ii) 1. Have a bitter taste 2. Have a slippery/soapy feel

3 Turn hot red litmus paper blue 4. Strong bases are corrosive [any 3 = 3 marks]

(b) (i) Soil depletion is the loss of nutrients from the soil whilst soil erosion is the washing away of the topsoil by water or wind. [2 marks]

(ii) 1. Organic fertilizer 2. Inorganic fertilizer [2marks]

(c) Ringing method is the application of fertilizer in a circular way around a plant such that the fertilizer is equidistant from the plant. [3 marks]

(d) 1. Afforestation 2. Education 3. Correct method of farming. [3 marks]

