SCIENCE MARKING SCHEME

2019

(1) (a) Copper. Iron, wood, glass, aluminum rod,

- ✓ Wax/ fat
- ✓ Heat source
- ✓ Drawing pins
- ✓ A supporter

(b) Knowledge objective

(i) = By the end of the lesson learners should be able to list solids according to note of ___ heat conductivity

- State the solid that conduct heat faster OR state the solid that conducts heat slowest

(ii) Skill Objective

By the end of the lesson learners should be able to melt in observe melting of wax in different solids

(c) Thickness of rods should be the same

- Rods should be of the same length

- Same amount of wax

- Heating should be of same intensity

(d) (i) Before investigation

- Collection of materials to be used

- Recording the procedure

(ii) After the investigation

- Returning materials
- Cleaning working tables
- Giving their reports

(2) (a) Methods of obtaining clean water (1mk)

(b) Give/ state/ mention – ways of obtaining clean water (2mks)

(c) (i) Sieving using of piece of cloth removes only solid materials but not micro organisms which might causes diseases. Thus water not safe (2mks)

(ii) - Boiling

- Chlorinating (1mk)

(d) – Materials used are readily available

- Experiment NOT complicated/ delicate

- Experiment is safe to conduct

- Procedures NOT lengthy (3mks)

(3) a) – Anemometer

- Wind velocity/ speed (2mks)

(b) (i) Nails

- small tins

- Cups

- Cross bars

- Piece of wood (2mks)

(ii) Prepare the cross bars and make a hole at the centre

- Fix the four tin cups at the end of the cross bars and colour one of the cups
- Fix a nail to the wooden stand
- Insert the gross bars to the nail on the instrument in an open space to test how it works (4mks)

(4) – It takes present knowledge as starting point for acquisition of more knowledge through inquiry, experimentation and observation

- New scientific facts about a certain scientific concept are bound to emerge in the course of the inquiry

(b) (i) Issue necessary materials and apparatus

- Give instructions on how to conduct the experiment
- Caution learners on likely dangers
- Guide leaners in recording results
- Supervise the learners in order to maintain discipline
- Assess learners ability to handle apparatus

(ii) Knowledge gained is retained for long

- Learner become, confident with knowledge gained
- It encourages independent learning
- It promotes acquisition of scientific skills
- Learners develop scientific attitude

(iii) Acquire materials and apparatus needed

- Design the experiment, including control where necessary
- Organize learners in groups and appoint group leaders
- Conduct experiment to ensure that learners will get the expected results

(5) (a) – Photograph (1mk)

- Rickets (1mk)

(b) (i) Dehydration

- Refrigeration

- Counting

- Bottling (2mks)

Traditional
- Smoking

- Salting
- Honey
- Drying (2mks)

(ii) For borne formation and development in fetuses

(6) (a) Site identification

- Discuss visit with the learners

- Divide learners into groups

- Prepare a questionnaire

- Instruct learners on Materials to carry

- Seek permission from owner or organization owning the site to visit

(b) – Not to eat any materials from the site

- not to interfere with wildlife (2mks)

(c) – Identify the names of the plants

- stating the type of interdependence

- classify the collected plant samples

- Mounting the collected plant sample (2mks) (OWTE)

(d) – Pupils may take longer time than that allocated for the lesson pupils may be indiscipline (1mk)

SECTION B (50MKS)

Graph (3 mks)

(7) b) (i) – K – Empty balloon

L – Inflated balloon (2mks)

(ii) – The two empty balloons balanced each other

When one balloon is filled with air the balance tilted. Showing that the balloon with air had more weight (2mks)

(iii) - String

- Straight piece of wood
- Nail

(8) (i) Plant cell

- Have cellulose cell wall

- Store starch in their cell membrane

(ii) Lack cell wall

- Store glycogen in their plasma membrane (2mks)

(b) – Have hair
- Mammary gland
- warm blooded
- Two pairs of limbs
- Complex brumes
- Teeth of different types
- Four heat chamber
- Internal fertilizer (2mks)

(c)	A	B	
(i) 1	Egg	Egg	
2	Larva	nymph	
3	Pupa	Adult	
4	Adult		(2mks)

(ii) Housefly – A

Locust – B (2mks)

(iii) - Nutrition

- Adequate space to avoid over
- Removal of manure
- Good positioning of waters feed thoughts
- Deworming young ones
- Treatment of infected animals (2mks)

(9) (a) BCG	Tuberculosis
Birth = Oral polio	Polio
1st hepatitis B	Hepatitis B
6 weeks = Oral polio	Polio
DPT	Tetanus
HEP B	Diphtheria whoosh cough HEP B (1mk)

(b) – Water gloves

- Store chemicals appropriately
- Labeling them well
- Don't store them in containers for storing food
- Proper disposal
- Read instructions before use.

(c) – Hallucinations

- Confusion
- Loss of coordination
- Bronchitis
- Abdominal sperm
- Decreased sperm mortality (2mks)

(10) (i) Materials

- Long string
- Two empty tin cans

- A nail

Procedure

(i) Use a nail to make a small hole at the bottom of each tin

(ii) Join the bottoms of the two empty tin cans with a long string

(iii) Speak into one tin while a friend listens from the other tin

(iv) Keep the string tight

(v) Remove the string (2mks)

(ii)

- Separating mixtures
- Making compasses
- Converting electrical energy into mechanical energy
- Remove pieces of magnetic materials in eyes
- Generation of electricity in dynamos
- Galvanometer
- I telephones telegraphs and switches
- Electric bells
- In machinery

(11) Sewage water

Fertilizer

Poor sanitation

Oil

Silt

(11) (a) Plant part e.g. – Hibiscus flower

Red cabbage leaves

Water, source of heat container piece of clean cloth, strips of blotting paper (2mks)

(b) Press an empty glass jar in the water in glass jar

- The glass jar should be pressed straight down

- water does not enter the glass jar

(12) (a) A- Touch receptor

B – Hair erector muscle

C – Sebaceous gland (1mk)

(b) Mucus produced – when one has a cold makes one to lose the sense of smell – since the nose senses flavours of foods like coffee, vanilla or lemon (2mks)

(13) (i) Drawing

(ii) M A = $\frac{\text{Load}}{\text{Effort}}$

$\frac{500\ N}{200\ N}$

= 2.5 (2mks)

(14) (a)

X – Renal artery

Y – Ureter

Z – Medulla (2mks)

(ii) Increase absorption of water in kidneys

- Stimulate lactation

(15) (a) (i) G – Nitrogen

H – Carbon dioxide (1mk)

(ii) Oxidation of food/ generation of energy/ respiration (1mk)

(b) – Neutralizing gases emitted from industries

- closing down sources of air pollution

- Use of effect means of

- Combustion

- Proper waste disposal

- Uses electric heating (2mks)