

CITY NURSERY AND PRIMARY SCHOOL

P.T END OF MARCH EXAMINATIONS 2024.

INTEGRATED SCIENCE MARKING GUIDE.

SECTION A.

1. The skin / Skin

2. Digestion

3. Using fossil fuels sparingly.

Using biogas to save natural gas.

Walking short distances to save fuel.

Using public transport to save fuel.

4. Lung books

5. Coffee

Cotton

Cocod

Tea

6. Secateurs help a crop farmer in pruning crops. / For pruning crops

7. A stone has no a clear shape. / A stone does not have a definite shape. / A stone has an irregular shape.

8. Germination is the development of a seed embryo into a seedling.

9. Through sound waves.

10. Stomata

11. Lungs

12. Mass is measured in kilograms while weight is measured in Newtons.

Mass does not change while weight changes.

Mass is the amount of matter contained in an object while weight is the force of gravity exerted on an object.

13. Femur bone / Thigh bone

14. Evaporation

Condensation

NB: Reject transpiration.

15. Hanging greens in poultry house to keep birds busy.

Providing enough feeds to birds.

Avoiding overcrowding birds.

16. Both a duckbilled platypus and a duck reproduce by means of laying eggs.
Both reproduce by laying eggs.

17.

${}^{\circ}\text{C}$ to ${}^{\circ}\text{F}$

$${}^{\circ}\text{F} = \left(\frac{9}{5} \times {}^{\circ}\text{C}\right) + 32$$

$${}^{\circ}\text{F} = \left(\frac{9}{5} \times 0\right) + 32$$

$${}^{\circ}\text{F} = 0 + 32$$

$${}^{\circ}\text{F} = 32^{\circ}\text{F}$$

\therefore 0°C is the same as 32°F .

18. The sun

Glow worms

Fire flies

Stars

Lightning

Erupting volcanoes

NB: Reject moon because the moon does not produce its own light.

19. Plants get carbon dioxide from people for photosynthesis.

Plants get care from people.

Plants are dispersed by people.

Plants get manure from peoples' wastes.

NB: Reject plants feed on animals.

20. An eagle eats up the birds of a poultry farmer/
An eagle brings losses to a poultry farmer
by eating his birds.

21. Heart water

East coast fever

Anaplasmosis

Red water

NB: Reject Nagana because it is spread by tsetsefly bites.

22. Irregular reflection.

23. A lever is a rigid bar with a turning point called fulcrum / A lever is a stiff rod that turns on a point called pivot.

24. To hid from enemies / For protection.

To trap their prey easily.

To signal out feelings towards their fellows.

25. Air

26. To protect user's hands from getting burnt while using it.

27. Mode of feeding

Mode of reproduction

Body anatomy

Type of fertilization

Having a backbone or not.

28. Vasoconstriction refers to the narrowing of blood vessels to reduce blood flow near the skin surface to prevent heat loss by radiation. / Vasoconstriction is the narrowing of blood vessels near the skin surface to reduce blood flow as well as heat loss.

29. Circumcision

Detoothing

Tatooing

Blood pacts

N.B: Reject blood transfusion since it is not a cultural practice.

30. Melting

31. X - South pole

32. Water can be replaced naturally. / Water can not get used up completely.

NB: Reject Water can not disappear.

33. To prevent patients from taking overdose.

To prevent patients from taking underdose.

To help patients know the right time for taking drugs.

34. Presence of moisture / water

Presence of oxygen

35. Tepid sponging cools down the body temperature. / reduces body temperature.

NB: Reject prevents high temperature since the patient already has high fever.

36. Molars / Molar teeth

NB: Reject permanent teeth since it is not a type of teeth.

37. Bees from a nearby apiary pollinates farmer's crops.

Reject: Apiary pollinates farmer's crops.

38. Plants make their own food./ plants manufacture their own food/ plants have chlorophyll for photosynthesis.

NB: Reject: plants provide food to
3 other organisms.

39. Air has weight.

Air occupies space.

Air exerts pressure

Air can be compressed

Air expands when heated

Air moves objects

NB: Reject any example of a gas given.

40. Polio / Poliomyelitis

SECTION B.

41 a) Rehydration is the replacement of lost fluids in the body of a dehydrated person.

b) Giving a rehydrated person plenty of fluids to drink.

Giving O.R.S to a rehydrated person.

c) Sodium
Potassium

42 a) Renewable resources are resources which can be replaced naturally when used.

b) The sun can not get used up.

c) i) Heats the water body to evaporate.
ii) provides sunlight energy for photosynthesis.

43 a) Respiratory system.

b) i) Trachea

ii) Lungs

c) The rubber sheet moves downwards /
The rubber sheet ~~expands~~. flattens

44 a) Puberty is a period when an individual becomes sexually mature. / Is a condition of sexual maturity.

b) Growth of pubic hair.

Sweat glands become more active.

Growth of hair under the arm pits.

c) Keeping their bodies clean.

Using sanitary materials during menstruation

Consulting health workers about
their bodies

Washing and putting on clean under wears.

Abstaining from sex till marriage

45 a) Convection

Conduction

NB: Reject radiation because it is
not a mode of heat transfer in
matter.

b) Heat gain raises the temperature of
matter/ Increases temperature.

Heat gain leads to expansion in
matter.

Heat gain leads to change in state
of matter

c) Decomposition

Volcanicity

Respiration

NB: Reject the sun since it is not a
natural process.

46 d) A joint is a point where two or
more bones meet in the body.

b) Synovial fluid

Cartilage

NB: Reject ligament or tendon.

c) Biceps / Flexor muscles

Triceps / Extensor muscles

Reject Cardiac muscles

47 a) Glass envelope

b) To enable it fit inside the glass envelope.

To increase its electric resistance for it to produce more heat and light.

c) Due to poor arrangement of dry cells.

When dry cells are used up.

When the switch is open.

In case the conducting wire is not working.

In case the bulb is blown.

d) Nitrogen

Argon

Reject any other gas given.

48 a) The sugar dissolved in water.

b) i) Solvent

ii) Solute

c) Solution. / sugar solution

NB: Reject: mixture or sugary water

49 a) Balanced diet is a diet that contains almost all food values in their right amounts.

b) Carbohydrates
Proteins
Vitamins

c) Beriberi
Kwashiorkor
Marasmus
Rickets
Scurvy
Night blindness
Pellagra
Sterility

NB: Reject any disorder of the digestive system.

50 a) In the ileum.

NB: Reject: small intestines

b) Mechanical digestion / physical digestion

c) Constipation
Indigestion

Intestinal obstruction

Vomiting

51 a) A freely suspended magnet rests in the North-South direction.

- b)
- Magnets have magnetic poles.
 - Magnets have magnetic fields.
 - Magnets are strongest at the poles.
 - Broken pieces of magnets regain both North and south pole.
 - Like poles of a magnet repel and unlike poles attract.
 - Magnetism passes through non-magnetic materials.

c) Iron

Cobalt

Steel

Nickel

d) Heating a magnet strongly,

Repeated hammering

Passing alternating current through a magnet

Keeping magnets with like poles together.

Leaving a magnet to rust.

52 a) Vena cava.

NB: Reject: Aorta because it is not a vein or pulmonary vein because it is a vein but not the largest one.

b) Most veins transport de-oxygenated blood while most arteries transport oxygenated blood.

NB: Reject the following.

- Veins are bigger than arteries.
- Veins have thin walls while arteries have thick walls
- Veins have valves yet arteries don't have. These are structural but not functional differences.

c) Malaria

d) Feeding on a balanced diet.

Doing regular body physical exercise.

Avoid eating too fatty food stuffs.

Avoid smoking and alcoholism

Having enough rest.

Sleeping under treated mosquito nets

53 a)

- i) Lungs: Carbon dioxide
- ii) Kidneys: Urine
- iii) Liver: Bile pigments
- iv) Skin: Sweat

54.a) Single fixed pulley.

b) Helps in raising flags on flag poles.

Helps in raising building materials on top of tall buildings.

For moving window curtains.

NB: Reject: Changes direction of force.

c) mechanical advantage = 1

Load = 35 kgf

Effort = ??

from: Mechanical advantage = $\frac{\text{Load}}{\text{Effort}}$ (1 mark)

$$M.A = \frac{L}{E}$$

$$1 = \frac{35}{E}$$

$$\frac{1}{1} \times \frac{35}{E}$$

$$1 \times E = 1 \times 35$$

$$E = 35 \text{ kgf}$$

The amount of effort needed is 35 kgf. (1 mark)

55 a)

- i) Tuberculosis
- ii) Rotavirus vaccine
- iii) Orally / Drops in the mouth
- iv) Left upper thigh

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