

MID-TERM TWO EXAMINATIONS 2023

Primary Seven

INTEGRATED SCIENCE

MARKING GUIDE

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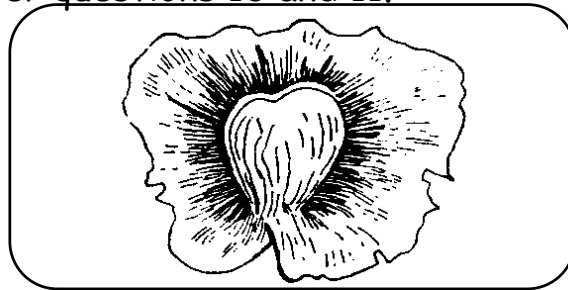
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SECTION A (40 MARKS)

1. Name one component of a residential house which allows in light.
✓ Window/door
2. State the main reason for rearing Angora goats.
✓ For mohair production (to get mohair)
3. Why does the action of amylase stop as the food bolus reaches stomach?
✓ Amylase is denatured by an acid in the stomach/Due to presence of acidic conditions in the stomach/Amylase does not work in acidic conditions
4. State one difference between the frogspawn and toadspawn.
✓ The frogspawn is laid in clusters while the toadspawn is laid in strings or ribbons
5. Which physical process enables a person to obtain salt from salt solution?
✓ Evaporation
6. How do third class lever machines simplify work?
✓ They increase the speed of doing work

7. Why should sick people always be fed on food rich in vitamins?
✓ To boost their immunity
8. State the function of oxygen during respiration.
✓ It burns food to produce energy/It burns food
9. Give any one reason why patients should not buy drugs from local shops.
✓ The drugs may be fake/may be contaminated/may be expired/are unprescribed

The diagram below shows a seed with wing-like structures. Study it carefully and answer questions 10 and 11.



10. Name any one seed with the structures shown above.
✓ Jacaranda/moringa/tacoma/pinus/terminalia/shorea
11. How does the seed shown above benefit from its wing-like structures during wind dispersal?
✓ They enable the seed to float in air/to fly in air
12. Mention one characteristic that enables a turtle to live in water.
✓ It has flippers for swimming in water/has a streamlined body to reduce viscosity
13. Why does a butterfly lay its eggs on the underside of the plant leaves?
✓ To protect its eggs from predators/direct sunshine
14. In which one way does growing of sisal crops promote tethering?
✓ They are used to make sisal ropes for tethering
15. How does the deficiency of Vitamin B₃ affect infants?
✓ It causes pellagra
16. By what process does smoke from burning wood spread in the kitchen?
✓ Diffusion
17. Why is cholera regarded as a faecal disease?
✓ It spreads due to improper disposal of faeces

18. How is the function of COVID-19 messages similar to that of PIASCY messages in the control of communicable diseases in school community?
- ✓ Both create awareness of communicable diseases/Both help people in the school community to know how to control the spread of communicable diseases
19. Mention any one way of harvesting minerals in the environment.
- ✓ By mining/drilling
20. How does strong cohesion affect matter?
- ✓ It makes matter to have compact (closely/tightly packed) molecules/It gives matter a definite shape/It makes matter unable to flow/It makes matter to appear a solid
21. Give any one reason why farmers hang green leafy vegetables in poultry houses.
- ✓ To provide vitamins and mineral salts to poultry/To keep birds busy to control vices

Saucepans P and Q in the diagram below are of the same size. Study them and answer questions 22 and 23.



22. In which saucepan will food get boiled last?
- ✓ Saucepan Q
23. Give a reason for your answer in (22) above.
- ✓ It has no lid (cover) to prevent heat loss/It is open to easily allow heat loss
24. Why is bush fallowing regarded as a useful practice in crop growing?
- ✓ It improves soil fertility/It enables the soil to regain its fertility
25. Name the livestock raised under cuniculture for its meat or wool.
- ✓ Rabbits

26. State any one function of gonads in reproduction.
✓ They produce gametes (reproductive cells)/They produce sex (reproductive) hormones
27. Why should the elderly people be fed on soft food?
✓ They have lost some teeth to chew food/To prevent indigestion since they have lost some teeth to chew food
28. Write down any one importance of biological changes in the environment.
✓ Moulting helps arthropods to grow/Reproduction prevents extinction of living things/Reproduction promotes continuity of life/Reproduction increases population of living things/Camouflaging in chameleons acts as their defensive mechanism
29. State the reason why the light ray moving from clear air to clear water bends towards the normal.
✓ Due to reduction (decrease) in speed of light/Due to decrease in speed of light as it moves from a rarer to a denser medium.
30. Give any one danger of siltation to aquatic life.
✓ It leads to death of aquatic life/destroys habitats for aquatic life/leads to water pollution/it makes water bodies shallow
31. Mention any one condition that can lead to bee sting.
✓ Honey harvesting during daytime/honey harvesting without a smoker/crushing a bee near a beehive/standing in the path of beeswarm/making a lot of noise near the hive/playing near the hive
32. Why do sex workers have a very high risk of getting HIV/AIDS?
✓ They have many sexual partners/are unable to have regular condom use/use sex to get money
33. Mention any one effect of heat loss on matter.
✓ It causes contraction of matter/decreases temperature of matter (cools matter)/changes the state of matter
34. Name the part which prevents internal light reflection in the human eye.
✓ Choroid
35. How is a woodpecker able to make holes in trees?
✓ It has a chisel shaped beak

36. Give a reason why a skink drop its tail when touched.

- ✓ For protection/To escape danger

The diagram below shows a type of thermometer. Study it carefully and answer questions 37 and 38.



37. Name the type of thermometer shown above.

Infrared thermometer/Temperature gun

38. How does the use of the above type of thermometer control the spread of contagious diseases?

It measures temperature without direct body contact/It prevents direct contact with an infected person when measuring temperature

39. In which one way do weeds affect crops in the garden?

- ✓ Weeds hide pests/compete with crops for sunlight, water and soil nutrients/lower crop yields/lead to stunted growth of crops

40. Name one viral disease in sheep.

- ✓ Foot and mouth disease/Nairobi disease/Rinderpest/Blue tongue disease

SECTION B (60 MARKS)

41. (a) Name the type of alcohol produced by fermentation.

- ✓ Ethanol/Ethyl alcohol

(b) State the importance of fungi in fermentation of alcohol.

- ✓ Yeast speeds up fermentation/Yeast provides an enzyme which speeds up fermentation

(c) Mention any one myth about alcohol.

- ✓ Alcohol boosts brain function/warms the body/solves social problems/can be used as a food supplement/alcoholics drink daily

(d) State the importance of a breathalyzer to the traffic police.

- ✓ It measures (detects) alcohol in exhaled air

42. (a) Name the part that a moth uses to detect scented flowers for pollination at night.

- ✓ Antennae/feelers

(b) State what happens when pollen grains land on stigma.

- ✓ Pollen tubes are formed/The pollen grains germinate and form pollen tubes

(c) Which biological process occurs in a flower after pollination?

- ✓ Fertilization

(d) How is a passion fruit plant adapted to cross pollination?

- ✓ Its flowers are self-sterile/The pollen grains cannot germinate on the stigma of the same flower

43. The table below shows animals in various groups of vertebrates. Study it and answer questions that follow.

W	X	Y	Z
Tilapia Nile perch	Bat Whale	Crocodile Chameleon	Newt Salamander

(a) To which group of vertebrates do animals in group **Z** belong?

- ✓ Amphibians

(b) How are animals in group **X** different from those in groups **W**, **Y** and **Z** in the table above?

- ✓ Animals in group X have fur (hairy bodies)/mammary glands/ossicles/give birth to live young **while** those in groups W, Y and Z do not have/reproduce by laying eggs

(c) In which of the groups shown in the table above would you put a goat?

- ✓ Group X

(d) Which group of vertebrates is not represented in the table above?

- ✓ Birds

44. (a) Write **E.M.T.C.T** in full.
✓ Elimination of mother-to-child transmission
- (b) Mention any **two** ways of reducing the risks of HIV transmission from an infected mother to her baby.
✓ Practising bottle feeding/Giving birth from hospitals/Taking ARVs during pregnancy/Avoiding sharing skin cutting objects with the baby
- (c) Which element of Primary Health Care (P.H.C) improves basic health among mothers and their new born babies?
✓ Maternal and child health care
45. (a) Why do pinworms cause itchy anus at night?
✓ Female pinworms lay their eggs around the anus at night
- (b) Write down **two** signs of intestinal worms in children.
✓ Diarrhoea/Loss of body weight/Passing out faeces with worms/itching around the anus/stunted growth
- (c) State any **one** way of controlling intestinal worm infestation in children.
✓ By deworming them/feeding them on well cooked meat/boiling water for drinking/advising them to wear shoes or sandals when walking in dirty places/giving them washed fruits
46. (a) Why should hens turn their eggs regularly during natural incubation?
✓ To prevent the embryo from sticking to the shell membrane/For easy diffusion of gases into the egg
47. (b) Give any **two** reasons why natural incubation is not recommendable for commercial purposes.
✓ Few eggs are hatched at a time/Some eggs are not hatched/The broody hen may eat the eggs/Eggs are not tested for their fertility/Eggs are not hatched in case the broody hen dies
- (c) Mention any **one** way of caring for a broody hen.
✓ Providing it with food/shelter/clean dry nest/protection against predators

48. Match the immunizable diseases in List A below with the signs in List B respectively.

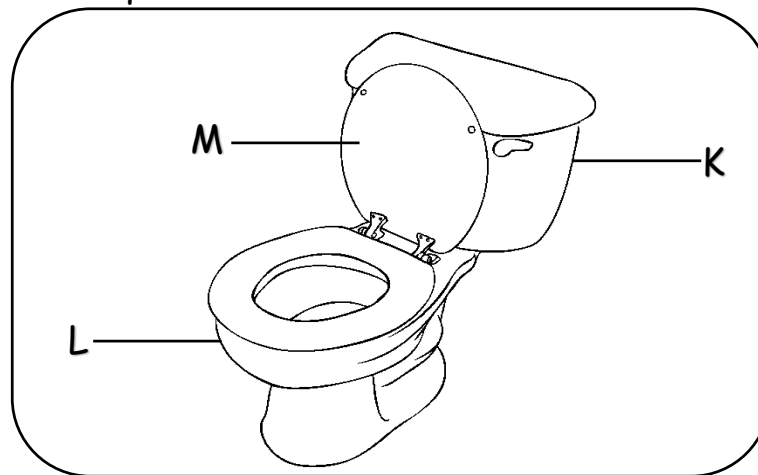
LIST A

- (i) Tuberculosis
- (ii) Poliomyelitis
- (iii) Pertussis
- (iv) Hepatitis B
- (i) Tuberculosis: Night sweats
- (ii) Poliomyelitis: Paralysis
- (iii) Pertussis: Runny nose
- (iv) Hepatitis B: Dark urine

LIST B

- Dark urine
- Night sweats
- Paralysis
- Runny nose

48. The diagram below shows a sanitary facility in an urban home. Study and use it to answer questions that follow.



- (a) Name the sanitary facility shown above.
- ✓ Flush toilet/Water closet/Waterborne toilet/Toilet
- (b) Give a reason why the part marked K is raised above part marked L.
- ✓ To increase water pressure during flushing
- (c) Why is the sanitary facility above not common in most rural homes?
- ✓ Due to lack of piped water supply/They are expensive to construct and manage
- (d) Give one advantage of using the sanitary facility above over an ordinary pit latrine.
- ✓ It does not smell like an ordinary pit latrine/It can be constructed inside a house unlike an ordinary pit latrine/It can be used by young children unlike an ordinary pit latrine

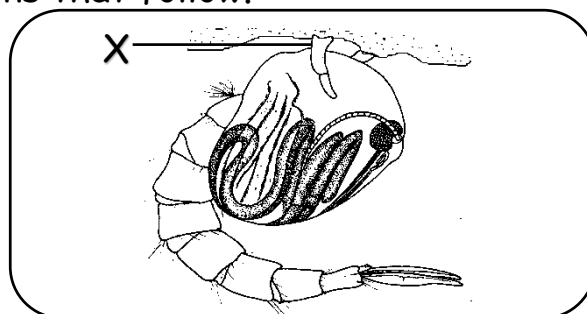
49. (a) Besides increasing voltage, write down **two** ways of strengthening an electromagnet.
- ✓ By increasing the number of turns in the coil/using soft iron core in the solenoid
- (b) Why is it not advisable to expose a permanent magnet to heat for a long time?
- ✓ It becomes demagnetized/loses its magnetism
- (c) State **one** use of magnets in hospitals.
- ✓ They are used to remove magnetic foreign bodies from casualties/
They are used in MRI scanners
50. Study the list of organisms below and answer questions.

Algae

Mushrooms

Ferns

- (a) Give any **one** similarity common to all the organisms above.
- ✓ All reproduce by means of spores
- (b) How is the mushroom different from algae and ferns in terms of feeding?
- ✓ A mushroom feeds by absorbing food from decaying matter (feeds saprophytically) while ferns make their own food (feed autotrophically)
- (c) Why are mushrooms very common in wet season?
- ✓ There is plenty of rotting matter from which they absorb food/there is much moisture to support their growth.
- (d) Name the organism formed by the feeding relationship between algae and fungi.
- ✓ Lichens
51. The diagram below shows the mosquito pupa. Study it carefully and answer questions that follow.



- (a) What scientific name is given to the mosquito pupa?
✓ Tumbler
- (b) State the function of the part marked X to the mosquito pupa.
✓ It helps in breathing
- (c) How does oiling stagnant water control mosquitoes in an area?
✓ Oil kills mosquito larvae/Oil suffocates mosquito larvae to death
- (d) In which way does severe malaria lead to anaemia?
✓ Plasmodia destroy red blood cells/Malaria parasites destroy white blood cells.
52. (a) By what process is yoghurt obtained from milk?
✓ Fermentation
- (b) Mention any one method of milk preservation.
✓ Pasteurization/Sterilization/Refrigeration/Boiling
- (c) When does a lactometer float in milk?
✓ When milk is pure/When no water is added in milk/fats are present in milk (fats are not removed from milk)
- (c) Write down one way of acquiring land for setting up a dairy farm.
✓ By buying/inheriting/hiring/renting/leasing land/through donations
53. Waldah grew maize crops in the same garden for six consecutive seasons.
- (a) What do we call Waldah's practice in crop husbandry?
✓ Monoculture/Mono cropping
- (b) Write down one disadvantage of Waldah's crop growing practice.
✓ It causes soil exhaustion (soil infertility)/encourages crop pests/lowers crop yields/encourages parasitic weeds
- (c) What advice would you give to Waldah?
✓ To practise crop rotation
- (d) How does early planting control crop pests?
✓ It enables the crops to mature before pests multiply.
54. (a) The farmer's rabbits have pale gums, rough hair, blood stained droppings and low appetite for feeds. Which disease are the rabbits likely to be suffering from?
✓ Coccidiosis

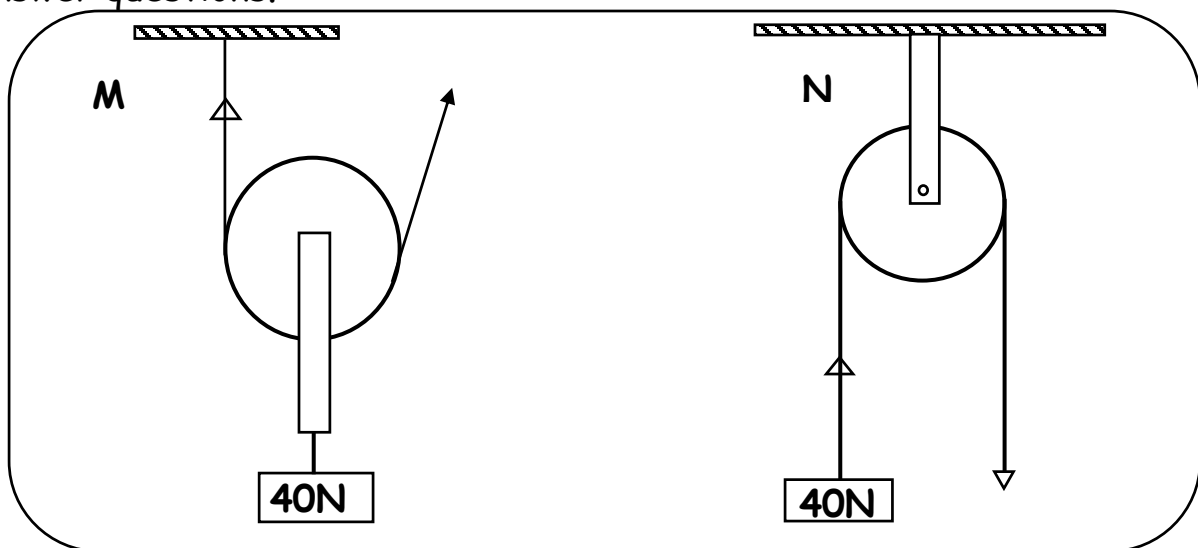
(b) Write down two ways of controlling the above disease in rabbits.

- ✓ Regular cleaning of the hutch/Regular vaccination/Isolating and treating sick rabbits/Disinfecting the hutch

(c) Besides allowing free air circulation, give one other reason why the rabbit hutch is made of a wire mesh.

- ✓ To allow in enough light

55. The diagram below shows types of pulley. Study them carefully and answer questions.



(a) Name the types of pulleys marked **N** and **M**.

- ✓ N: Single fixed pulley
- ✓ M: Single movable pulley

(b) Give one advantage of using pulley **M** over pulley **N** to raise the given load of 40N.

- ✓ Pulley **M** uses less effort than pulley **N**

(c) How are the ropes prevented from slipping on the pulleys above?

- ✓ The pulleys have grooved rims (have grooves on their rims)

END