NEXT EXAMINATIONS BOARD

PRIMARY SIX INTEGRATED SCIENCE MARKING GUIDE

End of Year 2026 (Promotional Set)

SECTION A (40 MARKS)

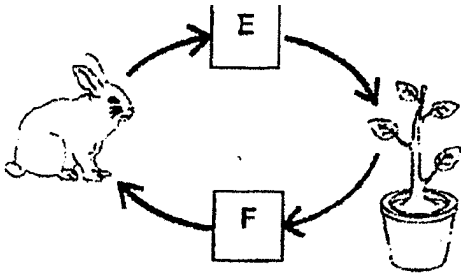
Answer all questions in this section. Questions 1 to 40 carry one mark each.

1. Name any one example of a root tuber.
   - Cassava
   - Sweet potatoes
   - Carrots
   - Turnips
   - White yams

2. Which disease can one suffer from due to lack of enough water for cleaning the eyes?
   - Trachoma
   - Conjunctivitis

3. Give one reason why small stones are added to poultry feeds.
   - Small stones help the bird to grind food in the gizzard.
   - They aid digestion in the bird.

The diagram below shows gas exchange between an animal and a plant. Use it to answer questions 4 and 5.



4. Name the gas represented by letter E.
   - Carbon dioxide

5. Name the process by which the plant uses gas E to make its food.
   - Photosynthesis

6. Why is it important to iron clothes after washing them?
   - Ironing kills the germs that remain in the clothes.
   - Ironing makes the clothes smooth and neat.

7. Give one use of an arm sling when giving first aid to a casualty with a fractured arm.
   - An arm sling supports the fractured arm.
   - It prevents the arm from moving.
   - It reduces pain.
   - It keeps broken bones in position.

8. Apart from ferns, name one other plant that reproduces by means of spores.
   - Mosses
   - Mushrooms
   - Moulds
   - Yeast

9. State one disadvantage of over depending on artificial fertilizers to improve soil fertility.
   - Artificial fertilizers are expensive.
   - They make the soil acidic.
   - They pollute water bodies.
   - They destroy soil organisms.
   - They destroy the soil structure.

10. State one reason why mercury is preferred to alcohol for use in thermometers.
   - Mercury does not wet glass unlike alcohol.
   - Mercury is easier to see than alcohol.
   - Mercury has a higher boiling point than alcohol.
   - Mercury is a better conductor of heat than alcohol.

11. Mention any one characteristic which enables some flowers to get pollinated by insects like bees.
   - The petals are brightly coloured.
   - The flowers have a sweet scent.
   - The flowers have nectar.
   - The pollen grains are sticky.

12. How can the breeding of mosquitoes be controlled in a home?
   - Mosquito breeding is controlled by draining stagnant water.
   - It is controlled by covering water containers.
   - It is controlled by slashing bushes around the home.
   - It is controlled by filling pools with soil.

13. Which method of harvesting trees is suitable for obtaining wood for electric poles?
   - Selective harvesting

14. How is sharing drugs prescribed for a certain disease a dangerous practice?
   - It may lead to a wrong dosage.
   - It may cause wrong treatment.
   - It may cause drug resistance.
   - It may cause side effects or death.

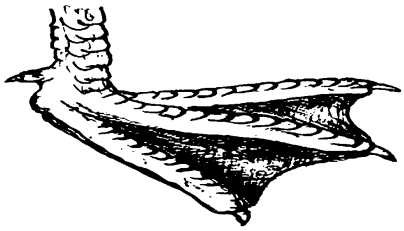
15. Mention any one practice which helps to prevent vectors like flies from breeding in rubbish in a dustbin.
- The dustbin should be covered.
- The dustbin should be emptied regularly.
- The rubbish should be burnt or buried.
- Insecticides should be sprayed in the dustbin.

16. Which process in the environment leads to soil formation through breakdown of rocks into small particles?
- Weathering

17. Mention any one factor which favours the breeding and growth of fungi.
- Fungi grow well where there is warmth.
- Fungi grow well where there is moisture (dampness).
- Fungi grow well where there is organic matter.

18. Why does a person lacking iron in the body develop anaemia after some time?
- Iron is needed to make haemoglobin in the red blood cells.
- A person lacking iron makes fewer red blood cells.

The diagram below shows the foot of a bird. Use it to answer questions 19 and 20.



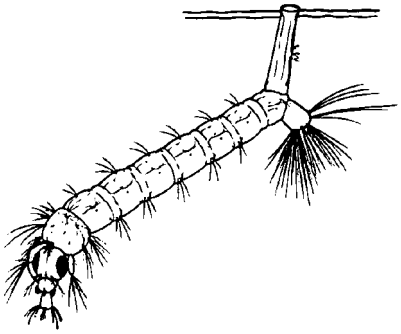
19. Name the group of birds to which the bird with the foot shown above belongs.
- Swimming birds

20. How is the foot shown above useful to the bird?
- The foot is used for swimming.
- It is used for paddling in water.

21. Which poultry disease is characterised by bloody droppings, ruffled feathers and reduced egg production?
- Coccidiosis

22. Why is it dangerous to leave utensils outside on a rack for a long time?
- Flies may contaminate the utensils with germs.
- Dust may make the utensils dirty.
- Insects may contaminate the utensils.

The diagram below shows a stage of development in the life cycle of a mosquito. Use it to answer questions 23 and 24.



23. Identify the type of mosquito to which the above stage belongs.
    - Culex mosquito

24. State any one way of controlling mosquitoes at the above stage.
    - Oil can be sprayed on stagnant water.
    - Stagnant water can be drained.
    - Fish can be introduced in ponds.

25. What is pollution?
    - Pollution is the introduction of harmful substances into the environment.

26. State the role of the oviduct in the female reproductive system.
    - The oviduct carries the egg from the ovary to the uterus.
    - Fertilisation takes place in the oviduct.

27. In which one way does a child get natural immunity?
    - A child gets natural immunity through breast milk.
    - A child gets antibodies from the mother through the placenta.
    - A child gets natural immunity by suffering from a disease.

28. How is a burn different from a scald?
    - A burn is caused by dry heat while a scald is caused by wet heat (hot liquids or steam).

29. Which component of air occupies the largest percentage?
    - Nitrogen

The diagram below shows an invertebrate. Use it to answer question 30.



30. To which group of invertebrates does the animal shown above belong?
    - Molluscs

31. Which type of clouds is a clear sign of rain?
    - Nimbus

32. What role does a cotyledon play in a germinating bean seed?
    - The cotyledon stores food.
    - It supplies food to the germinating seed (embryo).

33. Name the living organism that causes malaria in human beings.
    - Protozoa

34. Why does digestion of starch begin in the mouth?
    - Saliva contains ptyalin (salivary amylase) which digests starch.

35. Give one benefit of using a strip cup in cattle management.
    - A strip cup helps to detect mastitis.
    - It helps to check milk for abnormal changes.

36. Give one danger of burning polythene bags in the environment.
    - Burning polythene bags releases poisonous gases.
    - It pollutes the air.
    - It causes respiratory diseases.
    - It contributes to global warming.

37. How does mulching help to maintain soil fertility?
    - Mulch decomposes to add humus to the soil.
    - Mulching reduces evaporation of water from the soil.
    - Mulching prevents soil erosion.

38. What happens to the lungs when we breathe in?
    - The lungs expand and fill with air.

39. Give one advantage of using charcoal saving stoves for cooking to the environment.
    - Charcoal saving stoves use less charcoal so fewer trees are cut.
    - They reduce air pollution.

40. Why do human beings use blankets to cover their bodies on cold nights?
    - Blankets trap air, which is a poor conductor of heat, so body heat is not lost.
    - Blankets keep the body warm.

SECTION B (60 MARKS)

Answer all questions in this section. Questions 41 to 55 carry four marks each.

41. a) State the importance of each of the following practices in soil conservation:
i) Deep ploughing.
ii) Strip cropping.
b) Give any one property that makes loam soil the best for crop growing.
c) Give any one reason why farmers are encouraged to use natural fertilizers instead of artificial fertilizers.

(a) (i) Deep ploughing: allows water to sink into the soil / reduces run-off / breaks the hard pan (1)
(ii) Strip cropping: reduces the speed of run-off / wind / holds the soil together (1)
(b) It drains well and holds enough water / it is rich in nutrients / it is well aerated (any one) (1)
(c) They do not pollute the environment / they are cheap / they improve soil structure (any one) (1)

42. a) State any two ways a baby boy can be identified from a baby girl at birth.
b) Mention any one emotional change among adolescents.
c) Give any one way information about reproductive health is important to adolescents.

(a) Boy: has a penis / scrotum (testes). Girl: has a vagina (any two points, 1 mark each)
(b) Mood swings / feeling shy / feeling attracted to the opposite sex (any one) (1)
(c) It helps them to avoid early pregnancies / STIs / to make good decisions (any one) (1)

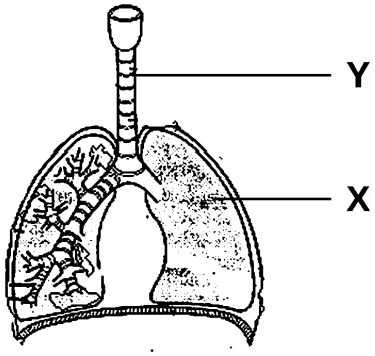
43. a) Give any two examples of chemical changes.
b) Write down any two characteristics of physical changes.

(a) Burning / rusting / rotting / cooking / souring of milk / burning of fuel (any two, 1 mark each)
(b) Easily reversible / no new substance is formed / no change in mass / no energy is given out or taken in (any two, 1 mark each)

44. Innocent was asked to investigate transpiration in plants. He was provided with the following materials: a potted plant and a string.
a) Mention one important item missing from Innocent's list.
b) In four sentences, explain how Innocent can use the materials to prove that plants transpire.

(a) A transparent polythene bag (plastic bag) (1)
(b) Cover a leafy branch of the plant with the polythene bag and tie it with the string. Leave it in the sun for some hours. Droplets of water form on the inside of the bag. This shows that the plant lost water vapour (transpired). (1 mark per correct point, maximum 3 marks)

45. The diagram below shows a respiratory organ. Use it to answer the questions that follow.



a) Name the parts marked by letters:
b) Which process takes place in the part marked X?
c) What helps the part marked Y to remain open all the time?

(a) X: Lung. Y: Trachea (windpipe) (1 mark each)
(b) Gaseous exchange (1)
(c) Cartilage rings (C-shaped rings of cartilage) (1)

46. a) Apart from wind, give two other agents of pollination in flowering plants.
b) Name the part of a flowering plant that mainly does the following:
i) Manufactures food.
ii) Absorbs water and mineral salts.

(a) Insects / birds / bats / water / animals (any two, 1 mark each)
(b) (i) Leaves (ii) Roots (1 mark each)

47. a) Give any two benefits of keeping cattle to farmers.
b) Give one importance of each of the following management practices in cattle keeping:
i) Castration.
ii) Ear tagging.

(a) Milk / meat / manure / hides and skins / income / draught power (any two, 1 mark each)
(b) (i) Castration: to control breeding / to make the bull calm / to improve meat quality (any one) (1)
(ii) Ear tagging: for identification of cattle / to keep records (any one) (1)

48. Mr. Kato is a heavy smoker. He smokes cigarettes every evening in the one-roomed house where he lives with his wife and two young children. The children often cough and have breathing problems.
a) Name the type of smoking practised by:
i) Mr. Kato.
ii) his young children.
b) State one danger of smoking to the health of the children.
c) Mention one life skill that can help Mr. Kato to stop smoking.

(a) (i) Mr. Kato: active smoking. (ii) His young children: passive smoking (1 mark each)
(b) Coughing / lung diseases / asthma / bronchitis / breathing problems (any one) (1)
(c) Assertiveness / decision making / refusal skills / coping with stress / self-esteem (any one) (1)

49. The table below shows a group of animals in list A and the groups they belong to in list B.

List A	List B
Lizards	Mammals
Newts	Birds
Rabbits	Reptiles
Penguins	Amphibians

Write against each animal below the group it belongs to from list B.
i) Lizard
ii) Newt
iii) Rabbit
iv) Penguin

(i) Lizard: Reptiles (ii) Newt: Amphibians (iii) Rabbit: Mammals (iv) Penguin: Birds (1 mark each)

50. a) Why is it dangerous to buy drugs from an unlicensed drug shop?
b) Name one danger of using expired drugs.
c) How is the use of factory-made drugs an advantage over local drugs?
d) Name one drug of abuse.

(a) Drugs may be fake / expired / wrongly stored (any one) (1)
(b) Poisoning / death / side effects / it does not cure the disease (any one) (1)
(c) They have accurate dosage and are tested for safety / they have instructions for use (any one) (1)
(d) Alcohol / tobacco / bhang (marijuana) / cocaine / heroin (any one) (1)

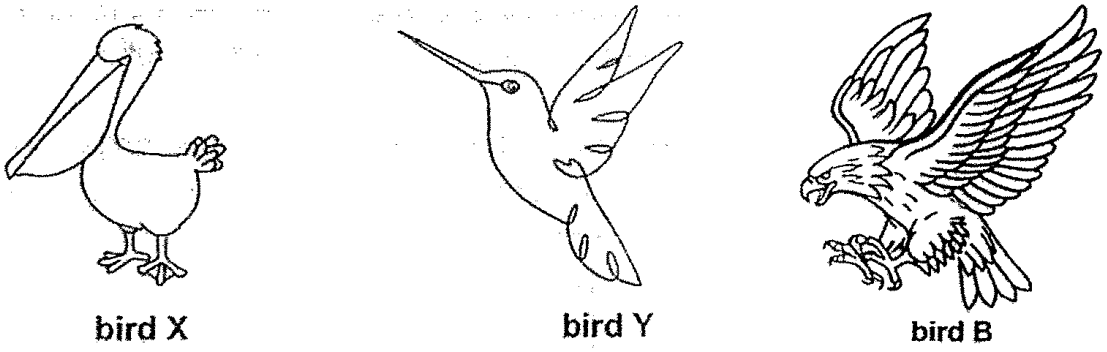
51. The table below shows some immunisable diseases, the vaccine administered and the age at which immunisation takes place. Complete the table by filling in the missing information.

Disease	Vaccine	Age
Measles	i)	9 months
ii)	BCG	At birth
Polio	Polio vaccine	iii) .....
Hepatitis B	iv)	6 weeks

(i) Measles vaccine (ii) Tuberculosis (TB) (iii) At birth (accept 6, 10 or 14 weeks) (iv) Pentavalent (DPT-HepB-Hib) vaccine (1 mark each)

Write your answers on the dotted lines in the table.

52. The diagram below shows three different birds X, Y and B. Use it to answer the questions that follow.



bird X bird Y bird B

a) Which of the birds X, Y and B is likely to survive in a lake shore area with plenty of fish?
b) Give a reason to support your answer in (a) above.
c) Why is bird Y most likely to feed on nectar unlike the other birds in the list above?
d) State one structural adaptation of bird B that helps it to obtain food.

(a) Bird X (1)
(b) It has a long beak with a pouch for scooping fish / it has webbed feet for swimming (any one) (1)
(c) It has a long, thin beak that can reach into flowers for nectar (1)
(d) It has a strong hooked beak / sharp claws (talons) for tearing flesh and holding prey (any one) (1)

53. a) Apart from filtration, give two other methods of separating impurities from water.
b) Name two activities done in the process of cleaning clothes.

(a) Boiling / sedimentation and decantation / chlorination / distillation / aeration (any two, 1 mark each)
(b) Soaking / scrubbing / rinsing / sorting / drying (any two, 1 mark each)

54. a) State any two reasons why bees swarm.
b) Give any two ways a bee keeper can care for bees in an apiary.

(a) Shortage of food / lack of water / disturbance by enemies / bad weather / overcrowding (any two, 1 mark each)
(b) Provide water / keep the hives clean / protect them from enemies / provide food in the dry season / provide shade (any two, 1 mark each)

55. The steps below show how to use the fire extinguisher shown in the diagram, but they are not in the correct order.



a) Rearrange the steps in the correct order by writing the letters only.

1st step

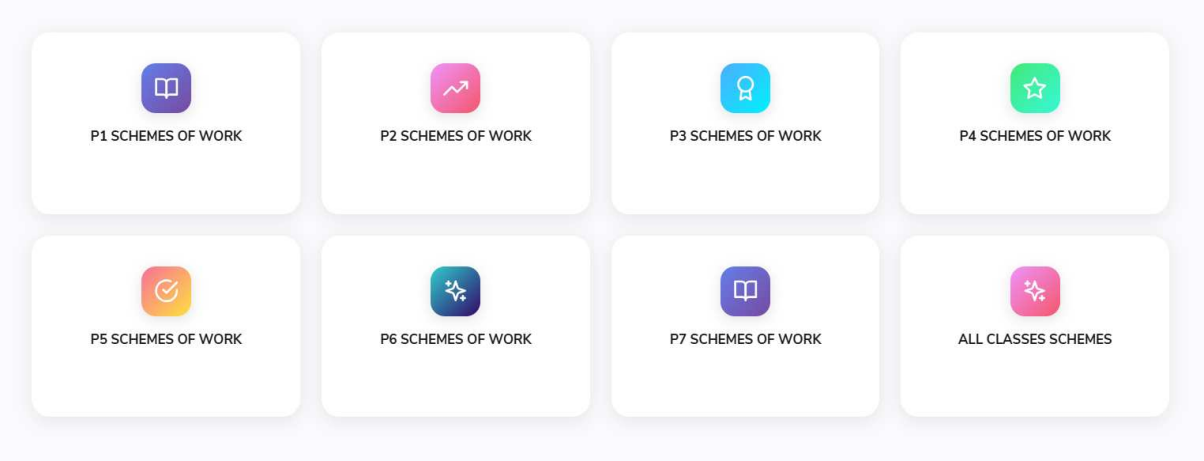
2nd step

3rd step

4th step

(a) Correct order: B, D, A, C (Pull the pin, aim at the base of the fire, squeeze the handle, sweep from side to side). One mark for each step in the correct position, 4 marks in total.

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