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2:15
8:32

STEM EXAMINATIONS BOARD

PRE-PRIMARY LEAVING EXAMINATION SET XII, 2024

INTEGRATED SCIENCE

Time Allowed: 2 hours 15 minutes

Index No.

Random No.						Personal No.		

Candidate's Name:

Candidate's Signature:

District ID No:

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Read the following instructions carefully:

1. Do not write your school or district name anywhere on this paper.
2. This paper has two sections: A and B. Section A has 40 questions and Section B has 15 questions. The paper has 8 printed pages altogether.
3. Answer all questions. All answers to both Sections A and B must be written in the spaces provided.
4. All answers must be written using a blue or black ball point pen or ink. Any work written in pencil other than graphs and diagrams will not be marked.
5. Unnecessary changes in your work and handwriting that cannot easily be read may lead to loss of marks.
6. Do not fill anything in the table indicated: "For Examiners' Use Only" and boxes inside the question paper.

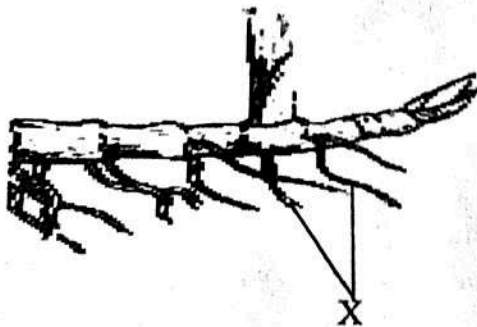
FOR EXAMINERS' USE ONLY		
Qn. No.	Marks	EXR'S NO.
1 - 10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44 - 46		
47 - 49		
50 - 52		
53 - 55		
TOTAL		

SECTION A : 40 MARKS

Questions 1 to 40 carry one mark each.

1. Why is the adult stage of a mosquito dangerous to human beings?
.....
2. How does decomposition process benefit crops?
.....
3. Why are carbohydrates digested in the mouth?
.....
4. State any one way crop farmers control pests.
.....
5. Give the similarity between fish and amphibians in terms of reproduction.
.....
6. Why does water jet out at different rates from a container with holes at different heights?
.....
7. How does strenuous exercise cause fainting among human beings?
.....
8. Why is artificial incubation best suited for commercial poultry farming?
.....
9. Give any one piece of information collected during demography on the available health service.
.....

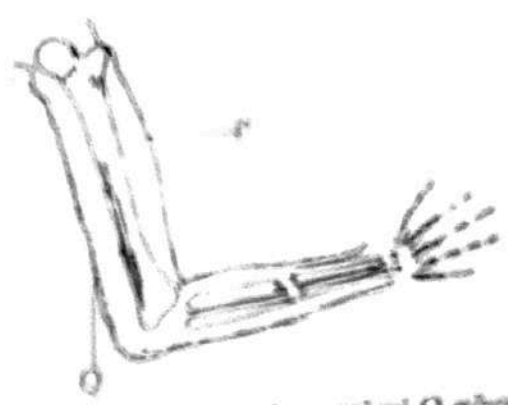
The diagram below shows a type of roots. *Study and use it to answer questions 10 and 11.*



10. Name the type of roots marked X on the diagram above.
.....
11. What is the difference between the roots marked X and those of bean plants?
.....
12. Give any one physical characteristic of incisor teeth.
.....

13. Which deficiency disease causes bleeding gums?
14. Why do some cattle farmers use free range system of grazing?
15. Why do small drums produce high pitched sound?
16. How are solar panels adapted to trapping solar energy?
17. Give any one way white blood cells keep the human body healthy?
18. How does application of ash keep a pit latrine clean?
19. State any one benefit of raising seedlings in a nursery.
20. How does a short circuit occur in an electric circuit?
21. How does boiling water for drinking control bacteria?
22. Why are horns called secondary structures in a bird?
23. Which device produces electricity using magnets?
24. Name the transmissible diseases which affect the spinal cord.

The diagram below shows the human arm. Study and use it to answer questions 25 and 26.



25. What happens to the muscles marked Q when the human arm is bent?

26. Why are muscles marked P and Q referred to as antagonistic muscles?

27. State the benefit of slippery body to a fish.

28. What is the use of a swarm catching net to a bee keeper?

29. Write down any one way of preventing fire outbreak in a home.

The diagram below shows the type of simple machines. *Study and use it to answer questions 30 and 31.*



30. Name the type of simple machines to which the machine marked T belong.

31. Why is the object marked T called a simple machine?

32. Mention any one fungal disease which affects the human skin.

33. State any one guideline of Primary Health Care.

34. Why should young people be rewarded for their behaviour in the community?

35. How do rabbit farmers ensure safe hutches for their rabbits during construction?

36. State the benefit of using water as a resource over minerals in the environment.

37. What is the danger of self medication to human health?

38. Give any one way of improving the quality of products produced by exotic cattle.

39. What happens when the fertilized ovum implants itself in the oviducts?
40. Why is injection method more effective than oral method of administering vaccines?

SECTION B: 60 MARKS

(Questions 41 to 55 carry four marks each.)

41. (a) What are primary sex characteristics?
- (b) Give any two sexual changes that prepare sexual organs for reproduction in adolescent girls.
- (i)
- (ii)
- (c) Why are adolescent girls at a risk of becoming anaemic?

42. Match items in S with those in T correctly.

	S	T
(i)	Intercropping	Mulches decay and form humus
(ii)	Bush fallowing	Recycles soil nutrients
(iii)	Mulching	Balances nutrient content of the soil
(iv)	Manuring	Enables the soil to regain fertility

- (i) Intercropping
- (ii) Bush fallowing
- (iii) Mulching
- (iv) Manuring
43. (a) What is the use of a potty to a mother with a baby?
- (b) Write down any two features of a VIP latrine.
- (i)
- (ii)
- (c) Why should a pit latrine be constructed downhill the water source?

44. a) Give the difference between magnetic and non magnetic materials.

b) Mention any two magnetic materials

c) Why does a magnet attract a piece of metal behind a wooden door?

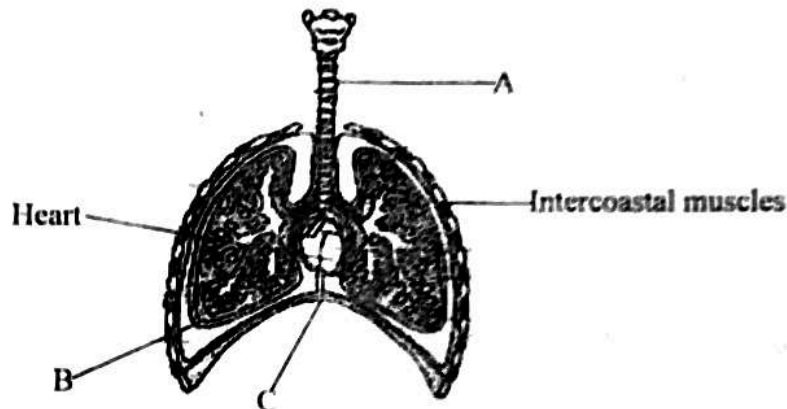
45. (a) Which type of pollination is carried out by moths?

(b) How are moths able to locate flowers at night?

(c) Why is pollination an important plant process?

(d) State the benefit of sticky pollen grains produced by some flowers.

The diagram below shows a respiratory system. Study and use it to answer question 46.



46. (a) Which type of breathing is shown in the diagram above?

(b) Name the parts marked;

(i) A

(ii) C

(c) Why does part B expand as shown above during breathing?

47. (a) Write down any two signs of a pregnant cow.

(i)

(ii)

(b) State any one benefit of steaming up in management of a pregnant cow.

(c) Why should a pregnant cow have a dry period before calving?

48. (a) Which group of mammals has well developed brain?

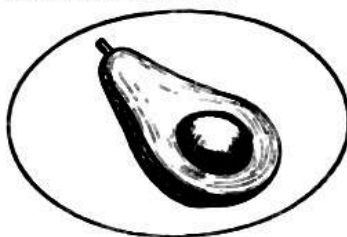
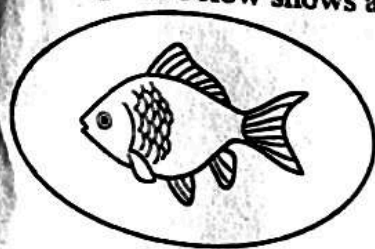
(b) Give any two ways carnivores are adapted to feeding on flesh.

(i)

(ii)

- (c) State the reason why mammals are called warm blooded.

The diagram below shows a meal. Study and use it to answer questions that follow.



19. (a) What term is used to describe the above meal?
 (b) What is the importance of including avocado in the above meal?
 (c) Mention any two food stuffs which serve the same purpose as matooke.
 (i)
 (ii)

20. (a) Which property of light leads to the formation of the rainbow?
 (b) Name the fifth colour of the rainbow.
 (c) Why does the rainbow normally occur in the morning and evening?
 (d) What causes the splitting of a white ray of light as it moves from air to glass?

21. (a) Give any two uses of steam in the environment.
 (i)
 (ii)
 (b) Apart from steam, mention any two energy resources from water.
 (i)
 (ii)

Use the table below to answer questions that follow.

X	Y
Growth	Incubation
Germ nation	Reproduction
Flowering	Growth

52. (a) Which type of changes is shown in table above?

(b) Give any two characteristics of the changes shown in the table above.

(i).....

(ii).....

(c) State the benefit of the above changes in the environment.

53. (a) What type of food do worker bees feed to the queen bee?

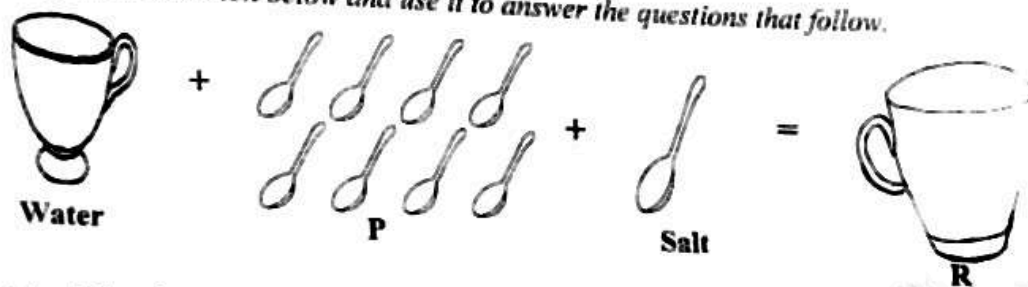
(b) How do worker bees defend the hive against attack?

(c) Apart from defending the hive, give two roles of worker bees in the hive.

(i).....

(ii).....

Study the illustration below and use it to answer the questions that follow.



54. (a) What does the above illustration show?

(b) Name the substances marked;

(i) P

(ii) R

(c) State the benefit of washing hands before preparing oral rehydration solution.

55. (a) Why does flour remain suspended in water?

(b) Which type of mixture is formed when flour is mixed with water?

(c) How can one separate the following mixtures?

(i) Seeds and their husks?

(ii) Tea leaves and milk?