



# MILESTONE EXAMINATIONS BOARD

PRE-PLE (Item 1 of 4)

2024

INTEGRATED SCIENCE

Time allowed: 2 hours 15 minutes

| 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 **13 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 will **not** be marked.
5. Unnecessary **changes** in your work and handwriting that cannot be read easily 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.** State the danger of rats to human health.

.....

**2.** How is regular blinking important to the eye?

.....

**3.** Mention any **one** process in plants which requires oxygen to take place.

.....

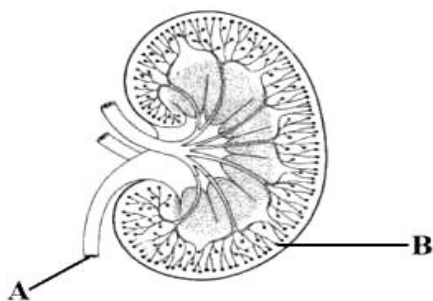
**4.** What is the importance of maggots in a pit latrine?

.....

**5.** How is the cactus plant able to reduce the rate of transpiration?

.....

The diagram below is of a kidney. Use it to answer questions **6** and **7**.



**6.** Name part marked **A**

.....

**7.** State the importance of part marked **B** in the kidney.

.....

**8.** Why is hair of importance on the body of mammals?

.....

**9.** What is the importance of the micropyle to the bean seed?

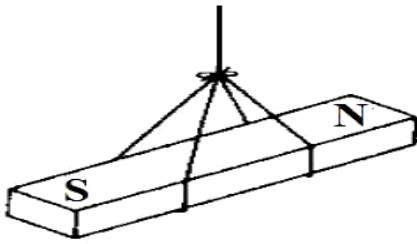
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**10.**How does a duck billed platypus differ from all other mammals in the mode of reproduction?

.....



Below is an illustration of a property of magnet. Use it to answer Question **11**.



**11.**Name the property of magnet illustrated above.

.....

**12.**State the excretory organ that eliminates carbon dioxide as a waste product from the body.

.....

**13.**What is the important role carried out by the moist skin in earthworms?

.....

**14.**Which germ causes anthrax in livestock?

.....

**15.**Name the state of matter, where water is in vapour form.

.....

**16.**Mention the permanent birth control method in men.

.....

**17.**In which way are biological changes similar to chemical changes?

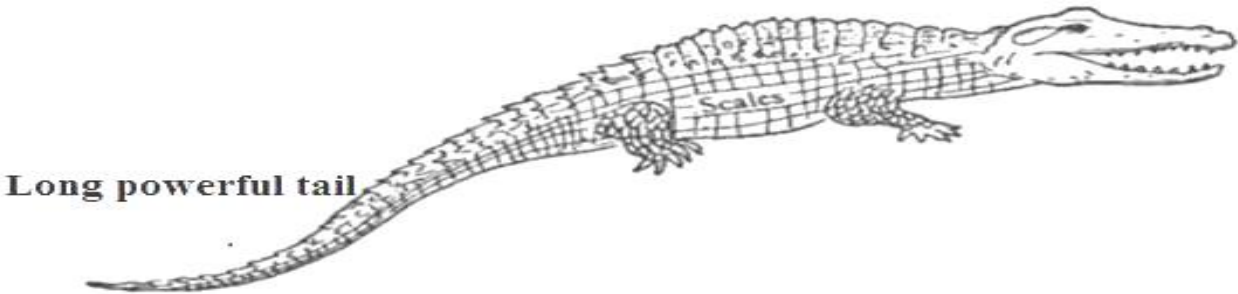
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- 18.**How is a jack fruit seed adapted to its mode of dispersal?  
.....
- 19.**Name the organ in the body which controls the amount of sugar in the blood.  
.....
- 20.**State the structure in the human body that connects a bone to a bone.  
.....




- 21.**Which force causes tear and wear in the moving parts of machines?  
.....
- 22.**What is the importance of the stigma in flowers during pollination?  
.....
- 23.**How does oiling of metallic tools prevent rusting?  
.....

The diagram below shows a reptile. Study it and answer questions **24** and **25**.



- 24.**State **one** characteristic of the above reptile.  
.....
- 25.**Give **one** use of the long powerful tail to the reptile above.  
.....
- 26.**What is the use of a lactometer to a milk vendor?  
.....

- 27.**State any **one** way in which a water pond near a school is of great danger.  
.....
- 28.**How do trees help in controlling air pollution?  
.....
- 29.**Patrick touched a kettle full of water and found it to be hot. Which body sense enabled her to tell that the kettle was hot?  
.....
- 30.**Why should both partners go for treatment if a wife or husband has gonorrhoea?  
.....
- 
- 31.**Why should a community care for water sources?  
.....
- 32.**Give the importance of the albumen during incubation of birds' eggs.  
.....
- 33.**Give the danger of over cultivation to the soil.  
.....
- 34.**Apart from rubber and metals, mention **one** other recyclable resource.  
.....
- 35.**Write down one quality of essential drugs.  
.....
- 36.**Why should farmers test seed viability before planting them?  
.....
- 37.**State the resource in the environment that enables the skin to make vitamin **D**.  
.....

**38.**What disease is someone most likely to suffer from when bitten by a mad dog?

.....

**39.**Give the insect whose larva stage is called grub.

.....

**40.**Why is the rate of urinating higher on cold days?

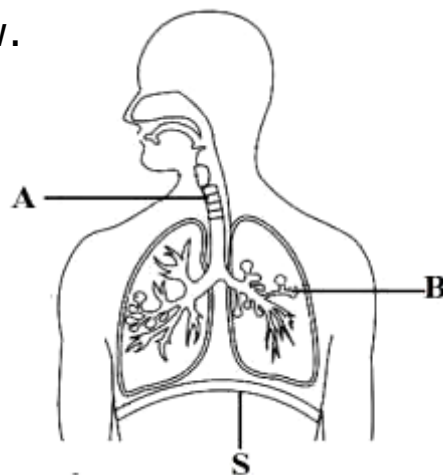
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### **SECTION B: 60 MARKS**

Questions **41** to **55** carry **four** marks each.

**41.**The diagram below is of a body system. Study it and answer the questions that follow.



(a) Name parts marked with letters,

**A** ..... **B** .....

(b) What happens to part marked **S** during,

Inhalation

.....

.....

Exhalation

.....

.....

**42.**(a) What are malnutritional diseases?

.....

.....

(b) Mention any **two** examples of malnutritional diseases.

.....

.....

(c) State the best way of preventing malnutritional diseases.

.....

**43.**(a) Give any **two** components of the soil.

.....

.....

(b) Which component of soil improves upon its fertility?

.....

(c) Why doesn't sand soil hold water for a long time?

.....



**44.**(a) State any **two** ways in which school pupils benefit from a school garden.

.....

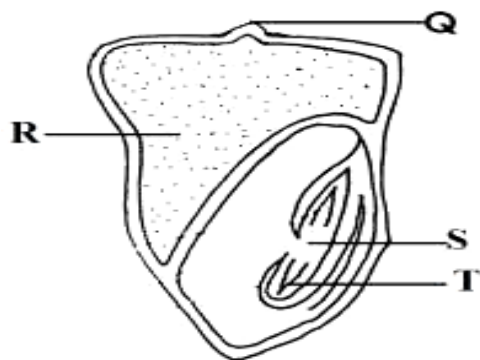
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(b) Give any **two** ways the pupils can get involved in caring for crops in a garden.

.....

.....

**45.**The diagram below shows a maize grain. Use it to answer questions that follow.



(a) Name the parts marked **Q** and **S**.

**Q** .....

**S** .....

(b) What will part **T** develop into after germination?

.....  
.....

(c) Give the function of the part marked **R**.

.....  
.....

**46.**(a) How is photosynthesis useful in plants?

.....  
.....

(b) State the **two** raw-materials for photosynthesis.

.....  
.....

(c) Why can't photosynthesis take place at night?

.....





**47. A child's temperature was measured and it was 40°C.**

(a) Which thermometer could have been used to measure the child's temperature?

.....

(b) What could be the equivalent of the above temperature reading on the Fahrenheit scale? **(03 marks)**

**48.**(a) What is communal grazing in livestock keeping?

.....

.....

(b) State any **two** advantages of communal grazing to herdsman.

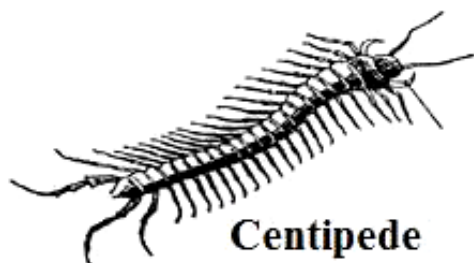
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.....

(c) Mention the disadvantage of communal grazing to livestock.

.....

**49. The diagrams below show a centipede and a millipede. Use them to answer question 49.**



- (a) Name the sub group of arthropods to which the centipede and millipede belong.

.....

.....

- (b) How do the above arthropods differ in the way they feed?

.....

.....

- (c) Give any **two** similarities between a centipede and a millipede.

.....

.....

- 50.**(a) Why are plants referred to as renewable resources?



.....

.....

- (b) Give **two** examples of non-living renewable resources.

.....

.....

- (c) State **one** way how animals are used as energy resources.

.....

.....

- 51.**Match the items in List **A** with those in **B** correctly.

**A**

- (i) Platelets
- (ii) Plasma
- (iii) Kidney
- (iv) Liver

**B**

- Regulates water level in the body.
- Clot blood in case of a cut.
- Produces bile juice.
- Transports digested food.

Platelets: .....  
Plasma: .....  
Kidney: .....  
Liver: .....

**52.**(a) Briefly explain the term “an electrolyte”.

.....  
.....

(b) Give **two** examples of electrolytes.

.....  
.....

(c) Why is it dangerous to touch live electric wires with bare wet hands?

.....  
.....



**53.**(a) State a farm activity that enables a farmer to;  
increase plant population in the garden.

.....  
.....

break the life cycle of pests.

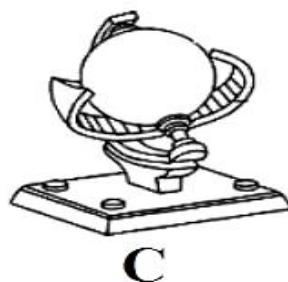
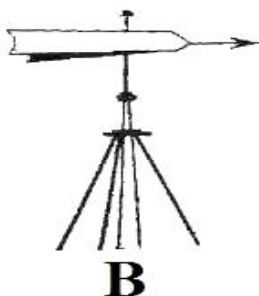
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.....

(b) Give **two** reasons why farmers use herbicides on their farms.

.....

**Turn Over**

**54. The diagrams below show some weather instruments. Study them and answer the questions that follow.**



(a) Name instrument **A**.

.....

(b) Mention the element of weather recorded by instrument **C**.

.....

(c) How is the function of instrument **B** similar to that of **D**?

.....

(d) Which weather instrument shows the strength of wind?

.....

**55. Study the table and answer the given questions.**

| <b>P</b>   | <b>Q</b> | <b>R</b> | <b>S</b>  |
|------------|----------|----------|-----------|
| Beans      | Cypress  | Mangoes  | Ferns     |
| Cowpeas    | Podo     | Avocado  | Mosses    |
| Groundnuts | Cedar    | Coconut  | Horsetail |

(a) State **one** way in which plants in group **P** are useful to;  
People

.....

.....

Soil

.....

.....

(b) Why are fruits from plants in group **R** termed as drupes?

.....

.....

(c) How do plants in group **Q** reproduce?

.....

.....



**END**