



STEP-UP EXAMINATIONS BOARD
NATIONAL PRE-PLC SET TWO
2024

INTEGRATED SCIENCE

Time allowed : 2 hours 15 minutes

Random No.						Personal No.		

Pupil's Name

Signature

District No.				

Read the following instructions carefully;

- This paper has **two** sections: **A** and **B**.
Section **A** has **40** questions and Section **B** has **15** questions.
- Answer **all** the questions. **All** the answers for both sections **A** and **B** must be shown in the spaces provided.
- All working must be done using a **blue** or **black** ball-point pen or fountain pen. Any work done in pencil other than graphs, pictures and diagrams will **NOT** be marked.
- Unnecessary changes of work may lead to **loss** of marks.
- Any handwriting that cannot easily be read may lead to **loss of marks**.
- Do **not** fill anything in the boxes indicated: **"FOR EXAMINERS' USE ONLY"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
QN. NO	MARK	EXR'S NO.
1 – 10		
11 – 20		
21 – 30		
31 – 40		
41 – 43		
44 – 46		
47 – 50		
51 – 53		
54 – 55		
TOTAL		

SECTION A

1. Name one example of an arachnid.

.....

2. Which property of a magnet enables a doctor to take accurate reading while using a six's thermometer?

.....

3. How does the removing of silts from water bodies important to aquatic animals?

.....

4. Give one reason why bottle feeding is important to a mother.

.....

5. State any one way how a wheelbarrow can minimize the spread of trachoma in the environment.

.....

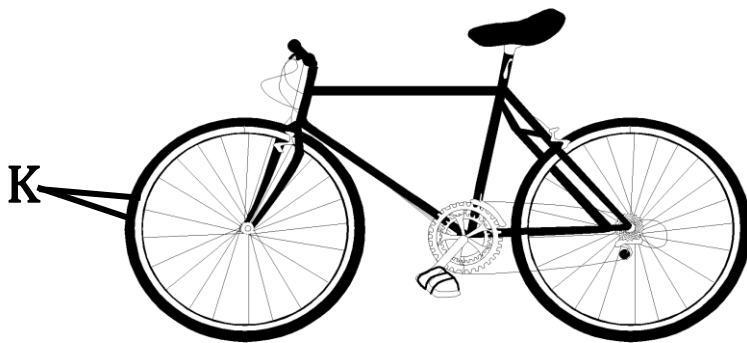
6. Mention any one method of applying fertilizers.

.....

7. Name the force that holds the nimbus clouds together.

.....

Below is a machine, use it to answer questions 8 and 9.



8. How does the above machine simplify work?

.....

9. State how important is part marked k to the machine above.

.....

10.How is the vagina similar to the stigma in terms of their function?

.....
.....



11.What does letter "I" stand for in PIASCY?

.....

12.Name the cells that lead to the growth of finger nails.

.....

13.How is the sun important in the fighting against of rickets in young children?

.....

14.Name the organ of a cobra which senses as the ear of the cheetah.

.....

15.State any one way how the type of soil erosion can be controlled in an area.



16.State any one way how you can protect an Albino against the effect of sunlight rays.

.....

17.Give any one factor considered by a doctor when prescribing drugs.

.....

18.Name the part of the human testis that stores the male reproductive gametes.

.....

19.How are insects important to Venus fly traps?

.....

20.State any one cause of short sightedness among individuals.

.....



21.Name the type of decomposition that takes place during the production of biogas.

.....

22.Name any one mineral salt found in mollusks shells.

.....

23.Give a reason to support your answer in “**22**” above.

.....

Below is an athlete running 400 metre rillies. Use it to answer the question 24.



24.Which force is posed by the stick in the athlete’s hand?

.....

25.How is the energy from the sun important to the lion?

.....

26.Nakato was bitten by a culex mosquito, which disease is most likely to affect her?

.....

27.What do you understand by the term food web?

.....

28. Which principal of P.H.C protects the Seventh day Adventists without interpreting their prayer?

.....

29. Name the excretory organ of the body that filters blood.

.....

30. Give a reason why the digested food goes to the liver before it is supplied to the rest of the body parts.

.....



31. What percentage of Oxygen is used during the process of respiration?

.....

32. Apart from keeping the body warm. How is the blubber important to the whale?

.....

33. Name the force that enabled the early man to discover fire.

.....

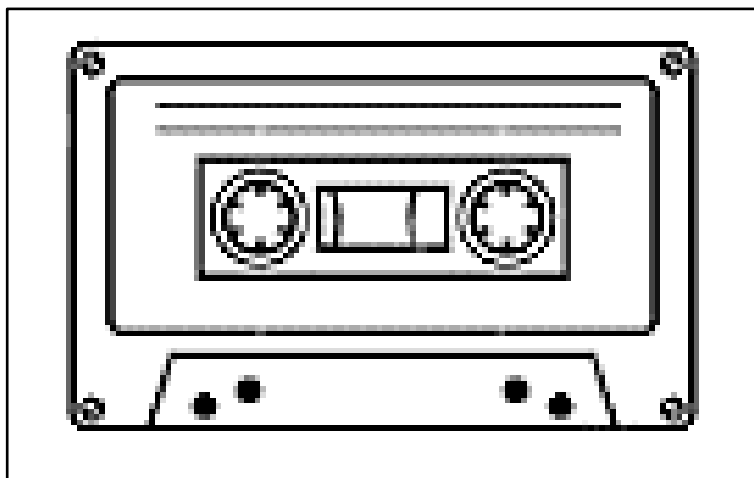
34. Why does a blue shirt appear blue?

35.How is the skeletal system important in the well being of the circulatory system?

.....

.....

Below is a device used storing of sound. Use it to answer the questions 36 and 37.



36.Which method of storing sound involves the use of the above device?

.....

37.By what process is the sound stored using the above method?

.....

38.State any one reason why poultry farmers paint their chicks.

.....

39.How does the lactometer detect the presence of water and absence of fats in milk?

.....

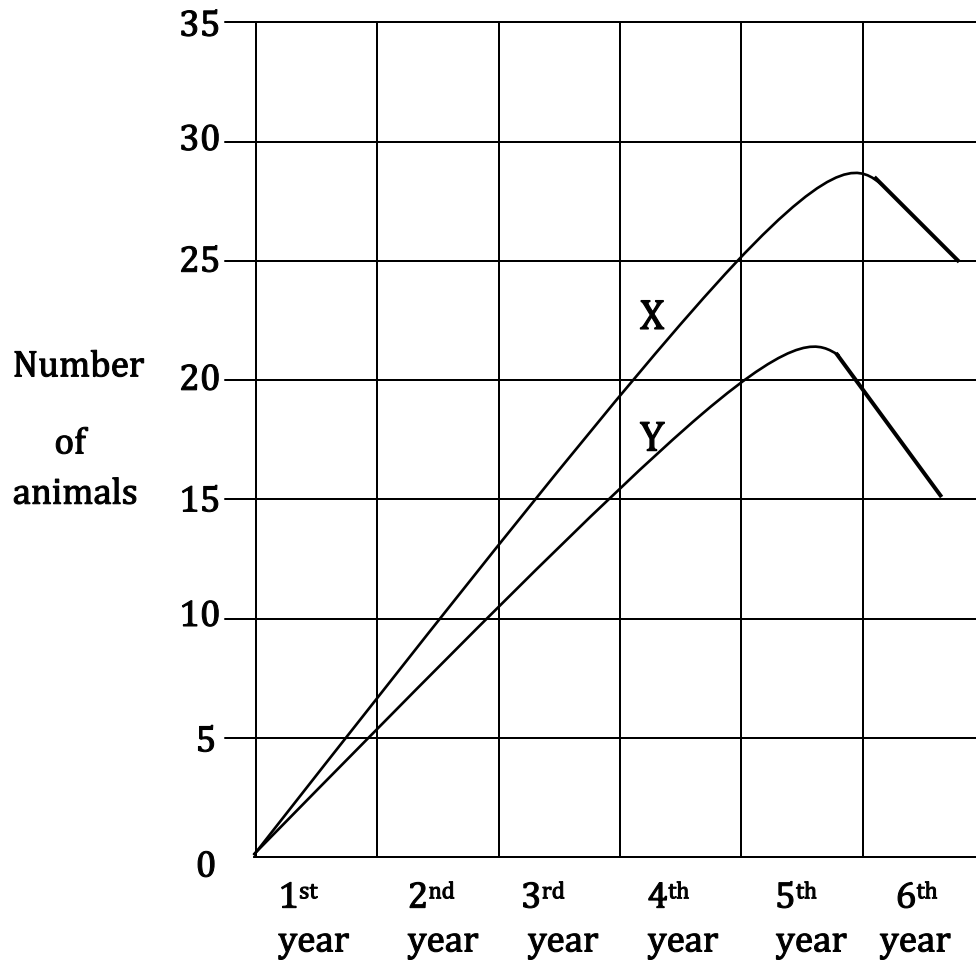
40.State the importance of a trumpet to the wriggler.

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SECTION B

41. Below is a graph showing ecosystem of two organisms. Use it to answer the questions that follow.



a) Which of the above organisms represent;

(i) Prey

(ii) Predator

b) Give a reason why there was uniform increase in the organism X.

.....

c) Give a reason to support your answer in "b" above.

.....

42.a) Define the term hard water.

.....

.....

b) Give any two ways how hard water can be made soft.

i)

ii)

43. Sand soil is one of the types of soil which does not favour the growing of crops.

a) State any two reasons why sand soil is unable to support the growth of crops 100%.

i)

ii)

b) Give any two ways how a farmer can improve sand soil for growing crops.

i)

ii)



44. Below is one of the ways how water bodies can be contaminated. Study it carefully and use it to answer the questions that follow.



a) Name the process of water contamination shown above.

.....

b) State any two causes of the above process.

i)

ii)

c) How is the process above dangerous to the life of aquatics?

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45.a) What are crop pests?

.....

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b) Below are some of the methods of controlling pests. Give one example in each of them;

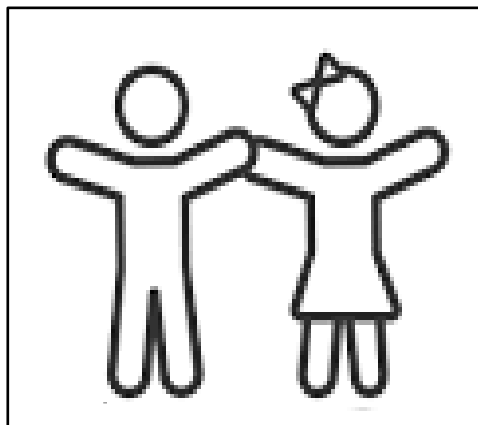
(i) Mechanical method.

.....

(ii) Cultural method.

.....

46. Below is a symbol used in science. Use it to answer the questions that follow.



a) What does the symbol represent in the study of science?

.....

b) State any one place where the above mentioned "a" take place.

.....

c) Mention any two activities involved in the symbol above.

.....



47. You are provided with the following materials as listed below. Use them to answer the question that follow.

- Cotton wool
- Dirty water
- Plastic bottle
- Gravels
- Clean sand
- Charcoal
- Clean glass jar

a) In four steps, describe how you would carry out filtration of the Dirty water.

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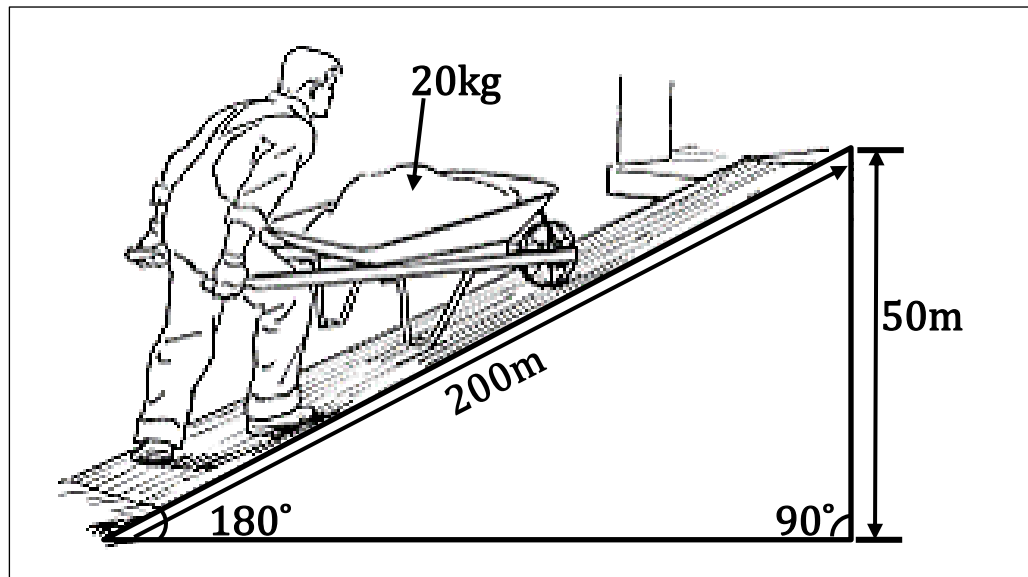
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48.Below is an inclined plane, use it to answer the questions that follow.



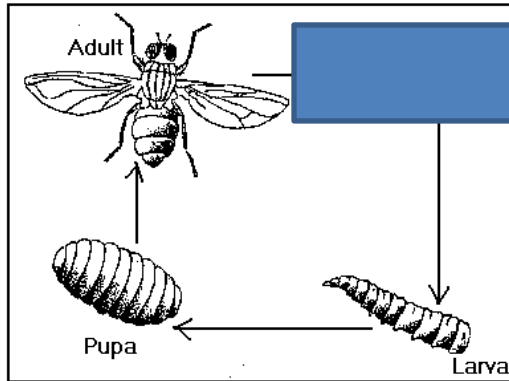
a) What is the load distance on the inclined plane above?

b) How is the above simple machine applied in our daily life?

.....

c) Calculate the mechanical advantage of the machine.

49. Below is a life cycle of an insect found in the environment. Use it to answer the questions that follow.



a) What type of life cycle does the above insect under go?

.....

b) Name any one host of the insect above.

.....

c) State any one effect of the insect to the host named above.

.....

d) Give any one way how the above effect can be reduced.

.....

50. COVID-19 is one of the most dangerous diseases in the history of diseases.

a) State any one way how COVID-19 is transmitted.

.....

b) Name any one long term effect of COVID 19 to children life.

.....

c) Give any two vaccines used in immunization against COVID-19.

i)

ii)



51.a) Below is a study about cattle keeping. Read it carefully and use it to answer the questions that follow.

“The sun ripened pastures of Nakasongola”

In the heart of Nakasongola, a rural village in Uganda, lay a lush green pasture where the locals grazed their cattle. The land was sun-kissed, and the grass was always fresh and nutritious. The villagers believed that the pastures held mystical powers, passed down through generations.

One day, a young boy named Kofi was tasked with his family’s cattle to the pasture.

As he held the herd, he noticed that one cow named Akira was struggling to keep up and Kofi examined Akira’s hooves, and discovered they were cracked and wornout.

With the help of his grandfather, Kofi learned how to trim Akira’s hooves and apply a special paste to protect them. Slowly but surely, Akira recovered and her milk production increased.

As the dry season approached, the pasture begun to wither and the villagers grew worried. Kofi’s grandfather taught him how to creat a makeshift feed using a mixture of cornmeal and water. |The cattle thrived on this feed and the villagers were grateful.

a) State any two valuable lessons Kofi learnt from the grandfather’s experience.

i)

ii)

b) In each of the stated lessons. Give any one way how they are important and helpful in cattle keeping.

.....

52. a) The following are vector born disease and germ. Match to each of them.

Vector born disease

Germ

i. Relapsing fever

Slavia virus

ii. Yellow fever

Zika virus

iii. Typhus fever

Borrelia

iv. Zika fever

Rickettsia

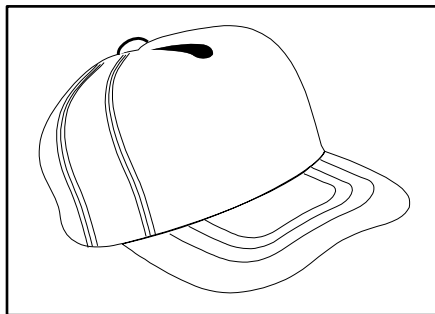
i. Relapsing fever

ii. Yellow fever

iii. Typhus fever

iv. Zika fever

53. Below is a luxury device worn by many people and useful to them.
Use it to answer the questions that follow.



a) Name the skin's cell that serve the same function as the above.

.....

b) How are the skin cells named in "a" above and the cap similar in their function towards the wellbeing of the skin?

.....

.....

d) Which layer of the skin manufactures the body cells named in "a" above?

.....

d) State any one way how you can care for the human skin.

.....

54. a) Define the term environmental degradation.

.....

.....

b) Mention one human activity that degrades the environment.

.....

c) Mention one use of wetlands.

.....

d) State one danger of wetland drainage.

.....

55. a) Name the characteristics of planks which enables bacteria to carry out binary fusion.

.....

b) Why are bacteria and lions are referred to as Heterotrophs?

.....

.....

c) How are bacteria important to ruminant animals?

.....

d) Apart from fixing Nitrogen and changing nitrogen into nitrates. How else are bacteria important to plants?

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END