

# BROAD EXAMINATIONS®

## P.7 INTEGRATED SCIENCE EXAMINATION PRE-PLE TRIAL SET I 2023

Time allowed: 2 hours 15 minutes.

Random No.	Personal No.

Candidate's Name: .....

Candidate's Signature: .....

School Name: .....

### Read the following instructions carefully:

1. This paper is made up of two sections: **A** and **B**.
2. Section **A** has **40** questions (**40 Marks**)
3. Section **B** has **15** questions (**60 Marks**)
4. Answer **ALL** questions in both sections **A** and **B**.
5. All answers must be written in the space provided in blue or black ball point pens and ink. **Only diagrams should be done in pencil.**
6. Unnecessary crossing of answers will lead to loss of marks.
7. Any handwriting, which cannot be easily read, may lead to loss of marks.
8. Do **not** fill anything in the boxes indicated for Examiners' use only.

### Teacher's comment to the learner

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### FOR EXAMINER'S USE ONLY

PAGES	MARKS	SIGN
Page 2		
Page 3		
Page 4		
Page 5		
Page 6		
Page 7		
Page 8		
<b>TOTAL</b>		

Approved by:

*Agness*

Team Head Science Dept.

### PLE REVISION TIPS FOR SELF STUDY

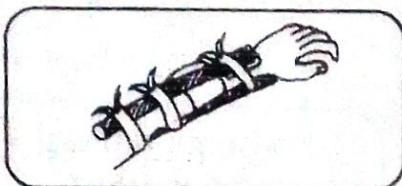
Write down what you know and understand on these topics of P.4

//plant life//Growing crops//Weather//Personal hygiene//Human body organs//Our food//The human teeth //Sanitation//Communicable intestinal diseases//Human vectors//Rabbit keeping

**SECTION .A. (40 Marks)**

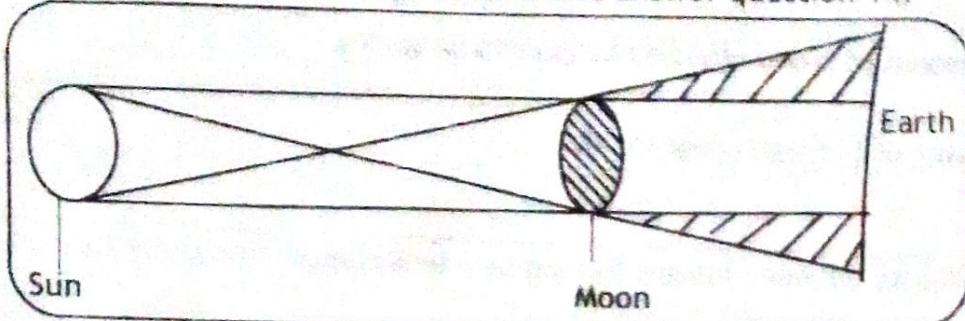
1. Name any one plant with fibrous root system.
2. Give one reason why bees visit flowers in the environment.
3. Which part of the male human reproductive system produces reproductive cells?
4. Suggest any one way farmers can protect their crops against the effects of drought.

The diagram below shows an injury. Use it to answer question 5.



5. Name the injury shown in the above diagram.
6. Why is a barometer kept in a Stevenson screen?
7. State the function of a fuse in an electric circuit.
8. Why do goat keepers carry out steaming up of their nanny goats?
9. How does untreated gonorrhoea affect the health of the newly born baby?
10. Write down any one example of annual crops.
11. How does reproduction of yeast differ from that of mushrooms?
12. State one reason why banana growers loosen the soil around the banana plants at the start of the rainy season.
13. In which one way is burning similar to moulting?

Use the diagram of an eclipse below and answer question 14.



14. What type of eclipse is shown above?

15. Write down any one activity done under oral hygiene.

16. How do trees growing in the environment help to control soil erosion?

17. State the main cause of fainting in human beings.

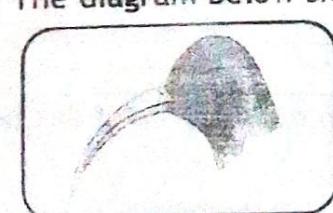
18. How is a swim bladder useful to most species of bony fish?

19. In which way does an umbrella help to manage sunny weather?

20. Give any one reason why friction is sometimes referred to as a nuisance force.

21. State any one adaptation of the ileum to absorption of digested food.

22. Apart from excretion, state one other function of the kidneys in the human body.



The diagram below shows a beak of a bird. Use it to answer question 23.

23. What does the group of birds whose beak is shown above feed on?

24. How are molars adapted to their function of crushing food?

25. Mention the component of blood affected by plasmodia germs.

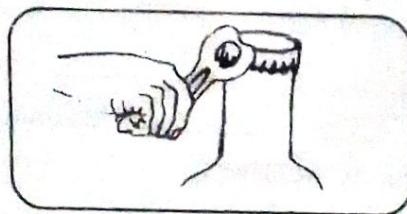
26. State any one danger of teenage pregnancies.

27. State any one similarity between images formed by a lens camera and those formed by the human eye.

28. Mention the role played by the sun in the water cycle.

29. How does paddocking control tick borne diseases among cattle?

The diagram below shows a simple machine. Use it to answer questions 30 and 31.



30. In which class of levers does the above machine belong?

31. Using letter Z, show the position of the effort.

32. Write down any one way some fungi can be harmful to humans.

33. What type of lens is used in correcting short sightedness?

34. Write down any one religious food taboo in your community.

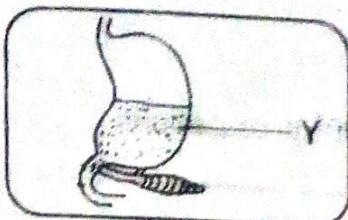
35. In which one way do hookworms affect the human circulatory system?

36. Suggest a reason why clothes should be grouped according to their degree of dirt before washing them.

37. State a reason why it is difficult to separate iron nails from needles using a magnet.

38. How are newly born babies protected against tuberculosis disease?

The diagram below shows part of the human alimentary canal. Use it to answer question 39.



39. Name the type of food whose chemical digestion begins in organ Y.

40. Mention any one activity done to promote cleanliness at school.

#### SECTION .B. (60 Marks)

41. (a) Mention any two examples of drugs commonly abused.

- (i) \_\_\_\_\_  
(ii) \_\_\_\_\_

(b) State any one effect of drug abuse to an individual.

\_\_\_\_\_

(c) Write down any one life skill used by adolescents to avoid drug abuse.

42. (a) Give one way in which a pregnant woman is vulnerable.

\_\_\_\_\_

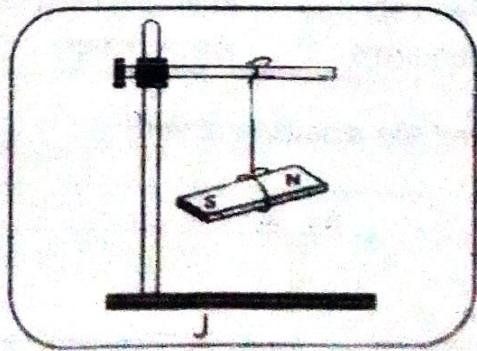
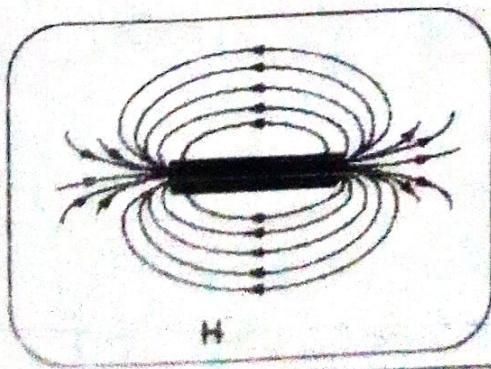
(b) State a reason why pregnant women should feed on;

(i) protein rich foods.

(ii) iron rich foods.

(c) Apart from proper feeding, give any one other requirement of a pregnant woman.

The diagrams below show properties of magnets. Use them to answer question 43



13. (a) State the properties of magnets shown by letters marked;

(i) H

(ii) J

(b) Which two groups of people find the property marked J useful?

(i)

(ii)

14. (a) By what process does heat from the sun reach us?

(b) Give any two ways in which heat from the sun is useful to people.

(i)

(ii)

(c) Apart from heat energy, mention one other form of energy got from the sun.

15. (a) What term is used to refer to the negatively charged particles of an atom?

(b) Which form of energy is produced when negatively charged particles of an atom flow?

(c) What happens when;

(i) unlike charges of atoms come near each other?

(ii) like charges of atoms come near each other?

46. (a) Write down any one exotic breed of chicken layers.

(b) Why should poultry farmers add crushed egg shells in feeds of layers?

(c) Write down the poultry vice that reduces the quantity of eggs on a poultry farm.

(d) Suggest the best way of controlling poultry vices on a farm.

The table below shows signs of diseases. Use it to answer question 47.

A	B	C	D
Brown hair	- knock knee legs	Loss of body weight	Pale gums
Swollen legs	- Bow shaped legs	Pot belly	Pale palms
Swollen arms	- Weak bones	Old looking	Fatigue

47. (a) Name the disease marked;

(i) B

(ii) C

(b) What advice would you give to a mother whose child is suffering from disease A?

(c) In which one way can the above diseases be controlled?

18. (a) State the difference between clean water and safe water.

(b) Give any one method of making water;

(i) clean.

(ii) safe.

(c) Why is distilled water not good for human consumption?

49. (a) Mention any two examples of joints that allow movement in only one direction.

(i)

(ii)

(b) How is friction at joints reduced?

(c) Mention any one way of keeping joints in proper working conditions.

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

(b) In which two ways are plants used as resources in the environment?

(i)

(ii)

(c) Give any one way of conserving plants in the environment.

51. (a) In which way are leguminous crops important in a crop rotation cycle?

(b) Give any two examples of leguminous crops that are commonly grown in your area.

(i)

(ii)

(c) What feature is used to identify leguminous plants in the environment?

52. (a) What does the term frequency of sound mean?

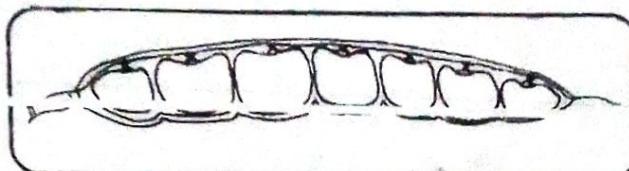
(b) How does frequency affect pitch of sound?

(c) Apart from frequency, give any two other factors that affect pitch of sound.

(i)

(ii)

The diagram below shows a fruit. Use it to answer question 53.



53. (a) How are the seeds of the above fruit dispersed?

(b) Mention any one crop whose seeds are dispersed in the same way as the one shown above.

(c) Suggest one way farmers can avoid making seed losses when they grow crops which show the mode of dispersal you have named in (a) above.

(d) State one reason why seed dispersal is important to wild species of plants.

54. (a) Why is clay soil the best type of soil for making ceramics?

(b) Mention a reason why ceramics are heated before using them.

(c) Mention any two examples of ceramics.

(i)

(ii)

55. (a) Write down two waste products excreted from the body by lungs.

(i)

(ii)

(b) Besides excretory system, to which other body system do lungs belong?

(c) In which region of the human body are lungs located?

END

**BROAD EXAMINATIONS GUIDES**  
**P.7 SCIENCE TRIAL SET I TERM III 2023**

QN	CORRECT ANSWER(S)	CLASS	RELATED CONTENT
1.	Maize plant/millet plant/wheat Plant/sorghum plant etc	P.4	- Types of roots - Functions of roots to plants
2.	To collect nectar.	P.4	- Meaning of pollination - Importance of pollination
3.	Testis (testes)	P.6	- Types of reproductions - Secondary and primary sex changes
4.	By practising irrigation.	P.4	- Way of caring for crops - Types of crops
5.	Fracture	P.4	- Types of fractures - First aid for fractures
6.	To prevent it from damage since it is delicate.	P.4	- Weather instruments - Their uses
7.	It breaks the circuit in case of high voltage.	P.7	- How a fuse works - Components of a circuit with their symbols
8.	To enable them produce healthy young ones/prevent low birth weight in nanny goats/enable them produce a lot of milk.	P.5	- Meaning of: - Steaming up - Drying off
9.	It causes blindness to newly born babies.	P.6	- STDs - How they spread and their causes
10.	Millet / beans/peas/sorghum/wheat/ cotton/cassava/etc	P.4	- Difference between annual and perennial crops - Pests that damage annual crops
11.	Yeast reproduces by cell budding while mushrooms reproduce by binary fission.	P.5	- Examples of useful fungi harmful fungi
12.	To allow proper growth of plant roots/ allow proper soil drainage around the banana plants / provide banana plants enough room for increase in size.	P.4	- Crop growing practices - Diseases that attack banana plants.
13.	Both form new substances / are irreversible.	P.5	- Types of changes - Importance of each type of change
14.	Solar eclipse	P.7	- Types of eclipse
15.	Brushing teeth / dental flossing/rinsing the mouth after eating	P.4	- Meaning of oral hygiene - Dangers of poor oral hygiene
16.	Tree leaves act as wind breaks /tree roots hold soil particles firmly/the tree canopy reduces the impact of the rain drop on soil.	P.5	- Meaning of social erosion - Causes of soil erosion
17.	Little oxygenated blood supply to the brain.	P.6	- Meaning of fainting - Ways of preventing fainting
18.	It keeps bony fish buoyant in water/ determines the depth at which a bony fish swims.	P.6	- Types of fish - Parts of a fish and their functions
19.	By providing shade to the user.	P.4	- Types of weather - Elements of weather
20.	Friction causes tear and wear in	P.7	- Types of friction

			Uses of friction
machines/creates unnecessary heat/noise in machines/delays work.		P.5	- Types of digestion - Parts of the alimentary canal
It is thin walled to allow easy diffusion of food/ fairly long (and made of villi) to increase the absorbing surface area.	P.7		- Diseases that affect kidneys - How to keep the kidneys functioning properly
Kidneys regulate the level of water in the body / regulate the level of salts in blood.	P.6		- Groups of birds - Factors considered when classifying birds
Nectar	P.7		- Types of teeth - Diseases and disorders of teeth
They have many cusps and ridges to crush food.	P.6		- Types of blood - Functions of blood
Malaria	P.6		- Requirements needed by a pregnant mother/signs of a pregnant mother
It may lead to death during delivery / school dropouts/lack of financial support/may be chased from home etc.	P.7		- The human eye - Eye effects - The lens camera
Both are diminished / inverted (upside down)/real.	P.4		- Components of water cycle - Uses of components
The sun heats moist places which causes evaporation.	P.6		- Tick borne diseases - Viral cattle diseases - Bacterial cattle diseases
By breaking the life cycle of ticks.	P.7		- Classes of machines - Examples of classes of machines
Second class levers			
Mark correctly	P.7		- Uses of machines - Mechanical advantage - Efficiency of machines
Some fungi can make food go bad / poisonous to humans when eaten / cause fungal diseases.	P.5		- Importance of fungi - Dangers of fungi to people
Concave (diverging lens)	P.7		- Diagram of a concave lens ; how lenses affect beams of light
Moslems are not allowed to eat pork/Christians are not allowed to eat meat during lent/some clans are not allowed to eat certain plants and animals because they are totems.	P.5		- Meaning of food taboos - Dangers of food taboos
Hookworms lead to hookworm anaemia	P.6		- Diseases that affect circulatory system The structure of the human heart
To prevent heavily dirtied clothes from staining lightly dirtied clothes/prevent dyed	P.6		- Meaning of laundry Steps taken in cleaning clothes

clothes from staining white clothes.  
Both iron nails and needles are magnetic materials.

P.7

- Properties Of Magnets
- Uses Of Magnets

By immunising them with BCG vaccine at birth.

P.5

- Similarities between tuberculosis and HIV/AIDS
- Immunisable diseases
- Causes

Proteins

P.5

- Importance of enzymes
- Examples of enzymes

Sweeping rubbish in classrooms/mopping cemented latrines/cutting tall bushes in the school compound etc.

P.4

- Meaning of sanitation
- Elements of sanitation

### SECTION. B

(a) Mairungi / cannabis/nicotine/tobacco  
(b) Insomnia / self neglect/brain and other body organ damages  
(c) Self-esteem / self awareness

P.6

- Meaning of drug abuse and drug misuse
- Essential drugs

(a) When she is sick / is in labour.  
(b) (i) To repair her worn out body tissues and build the body of the unborn baby.  
(ii) To help in the formation of haemoglobin for both the mother and the unborn baby.  
(c) Physical exercises / proper personal hygiene /appropriate clothing.

P.5

- Meaning of vulnerable groups of people
- Foods needed by different vulnerable groups of people

(a) (i) Lines of force run from North pole to south pole.  
(ii) J - when a magnet is freely suspended, it rests in north-south direction.

P.7

- Methods used to make temporary magnets
- Examples of temporary magnets

(b) Pilots / sailors

(a) By radiation  
(b) Radiant heat from the sun helps to dry wet clothes / dry harvested crops/generate solar electricity.

P.5

- Meaning of heat energy
- Sources of heat energy

(c) Light energy

(a) Electrons  
(b) electricity  
(c) (i) attraction  
(ii) repulsion

P.7

- How lightning is produced
- Importance of lightning

(a) Ancona / Minorca / brown egger/white leg horn etc

P.5

- Meaning of poultry vices
- Systems used to rear poultry

(b) To provide calcium to layers

(c) egg eating

(d) Debeaking all birds.

(e) (i) B - rickets

P.4

- Meaning of deficiency diseases

(ii) C - Marasmus

Their causes of and how to prevent them

	(b) Feeding her child on foods rich in proteins. (c) By feeding on a balanced diet.		
8.	(a) Clean water is water which is free from impurities while safe water is water which is free from germs. (b) (i) filtration / decanting (ii) chemical treatment/boiling (c) It does not contain mineral salts.	P.6	- Steps taken to obtain salt from ash - Dangers of using hard water
49.	(a) Knee joint / elbow joint/ knuckle joints. (b) By the help of synovial fluid / cartilages. (c) Performing regular physical exercises.	P.6	- Diseases of skeleton - Parts of a skeleton and function
50.	(a) They can be replaced naturally once they are used. (b) Plants are eaten as food / used to make herbal medicine. (c) By practicing afforestation / reafforestation/planting crops.	P.7	- Meaning of conservation - Why people conserve resources - Meaning of resources
51.	(a) They help in adding nitrogen to the soil. (b) beans / soya beans / cow peas/ground nuts (c) root nodules	P.6	- classification table for plants - economic importance of conifers
52.	(a) Frequency means the number of vibrations produced by an object per second. (b) The higher the frequency the higher the pitch while the lower the frequency the lower the pitch. (c) Tension of the vibrating object / nature of the vibrating object.	P.6	- Mean of volume of sound - Devices used to store sound - Devices used to reproduce sound energy
53.	(a) By self dispersal (b) Bean / soya bean / cow peas (c) By harvesting them at the right time. (d) It increases chances of survival of wild species of plants/prevents overcrowding of plants/reduces epidemic diseases among plants/etc.	P.6	- Meaning of seed dispersal - Plant propagation methods
54.	(a) It is sticky / smooth / has fine particles. (b) To harden them. (c) Pot / clay charcoal stove/ clay plates.	P.3	- Meaning of soil - Types and layers of soil - Importance of soil
55.	(a) carbon dioxide / water vapour (b) respiratory system (c) in the chest cavity (chest region)	P.6	- Meaning of respiration - Where respiration occurs - Waste products