



PRE-P.L.E MOCK EXAMINATIONS, 2023

BASIC SCIENCE AND HEALTH EDUCATION

Time allowed: 2 hours 15 minutes

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Candidate's name: _____

Candidate's signature: _____

EMIS number: _____

District Name: _____

SECTION A

1. What process enables Caesar, a P.7 boy to detect onions being cut in the next room?

2. Suggest any one biological method of controlling diseases whose germs are spread by mosquitoes.

3. How is docking of rams a bad practice in the management of sheep?

4. For what reason is a top bar bee hive having a queen excluder?

5. Obbo's child was rushed to the hospital with the following signs and symptoms: runny nose, skin rash, dry cough, red eyes and sore throat. Suggest the vaccine that his child missed during the routine immunization schedule.

6. Give a reason why electric wires are fixed sagging on electric poles during installation.

7. How is the kink of a clinical thermometer similar to the valves in a dog's heart in terms of their function?

8. Mention any one disease that attacks honey bees.

The diagram below is of a blood cell, study and use it to answer questions that follow.



9. Identify any one disease of the circulatory system that affects the blood cell drawn above.

10. How is the above blood cell adapted to its function in the human body?

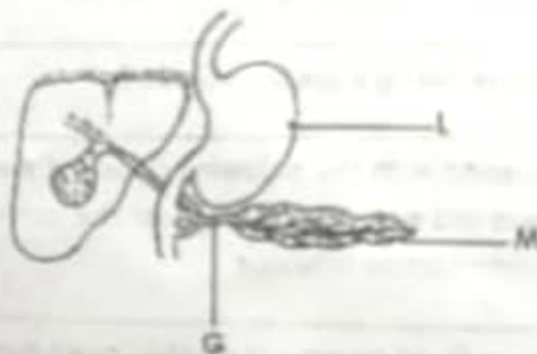
11. Wafula was diagnosed with chronic bronchitis. What bad health life style would you advise him to stop?

12. Why is it a bad practice to make a person who has taken corrosive poison to vomit?

13. In the space provided below, illustrate and name the garden tool used for cutting grass used as animal feeds.



Below is a diagram of human digestive system. Use it to answer questions 14 and 15.



14. Name the duct labelled G above.

15. Why does part labelled L produce mucus during food digestion?

16. Mention one important health practice done by P.3 pupils before eating food.

17. What term is used to describe the smallest and weakest kitten in a litter?

18. How do soft porous materials control echoes in cinema halls?

19. Diogo has a family of three wives and twelve children. Suggest one anti-social behaviour that may be easily practised in his home.

20. State the farm equipment used to administer liquid medicine to cows through the mouth.

21. How does mulching the land control soil erosion in a tomato garden?

22. State the difference between heat and temperature in terms of measuring instruments.

23. An Irish potato has mass of 60 grammes and volume of 20cc. Calculate its density.

24. Name any one mineral deficiency disease in infants.

25. How are nictitating membranes useful to an eagle during flight?

26. Mention the equipment used by blind people to enable them walk easily without knocking obstacles on their way.

27. Point out the disease of human beings that is vaccinated against using HPV vaccine.

28. How are the gills of a mushroom similar to the testes of a goat in terms of their function?

29. Write ABC in full as used in the administration of first aid?

30. Why do sugarcane plants develop prop roots in later stages of their growth?

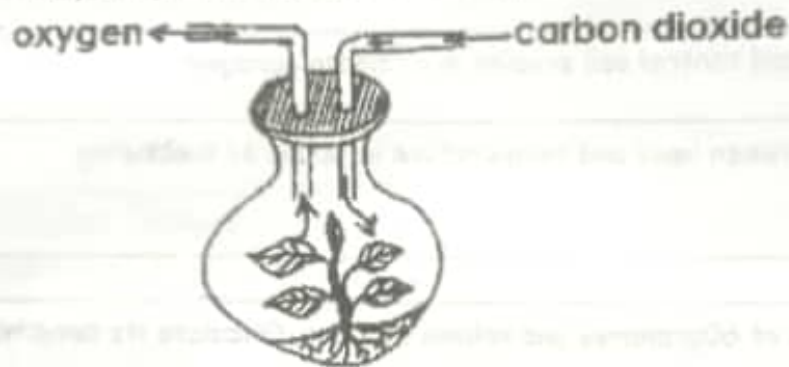
31. Give any one example of a water habitat vector disease caused by a virus.

32. Why is the udder of a lactating cow washed using lukewarm water before milking is done?

33. By what process does smoke from a kitchen move upwards through the chimney?

34. In what one way is a chemical change similar to a biological change?

Use the plant process below to answer questions that follow.



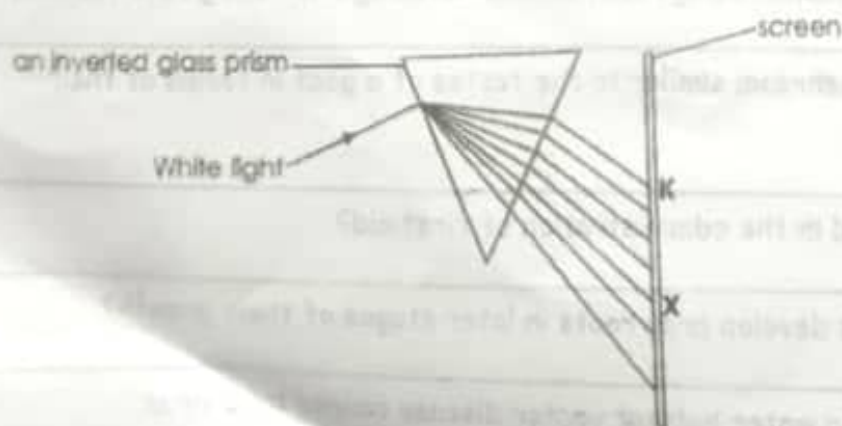
35. Identify the plant process illustrated in the above diagram.

36. How is the above plant process useful to your class teacher?

37. Besides being more dense than water, give one other reason why a stone sinks when thrown in a basin of water.

38. Solder is an alloy of tin and lead commonly used in an electric fuse. Suggest one reason for mixing the above metals.

Use the diagram below to answer questions 39 and 40.

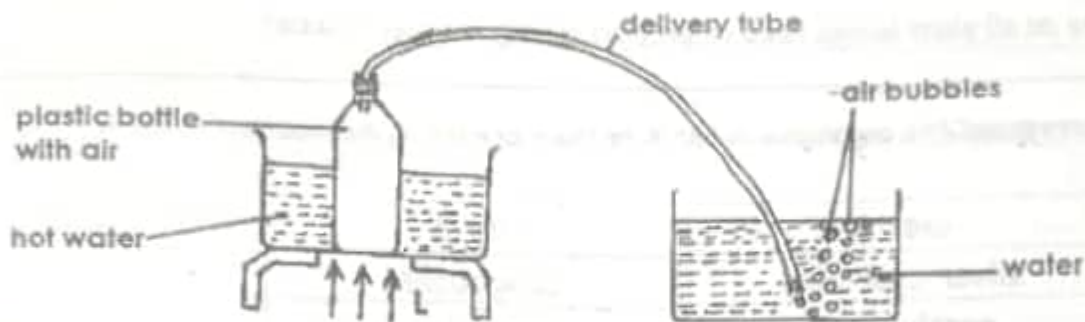


39. Identify the colour represented by letter X above.

40. State a scientific reason why the colour labelled K appears on top as seen above.

SECTION B

41. Use the diagram below to answer questions that follow.



a) What does the above experiment prove about air?

b) Identify the form of energy represented by arrows L above.

c) Suggest one effect of the above form of energy on matter.

d) How is the property of air "air exerts pressure" useful in our daily life?

42. a) Why is clay soil said to be the best type of soil for pottery?

b) From what layer of soil are plant nutrients removed during leaching?

c) How do earthworms help in soil aeration?

d) Besides making glasses, state one other way how sand soil is useful to man.

43. Aodu's child has sunken eyes, sunken fontanelle and dry mouth lips.

a) What condition is his child suffering from?

b) Suggest any one way of helping the above child to overcome the condition in (a) above.

c) Why would you advise Mr. Aodu to give his child plenty of fruit juice?

d) How is the condition of the above child dangerous if not handled in time?

44. a) Define the term photosynthesis?

b) Mention the raw materials for photosynthesis that is used by coca cola soda making factories to preserve soda.

c) How are leaves adapted to the process of making glucose?

d) Why do all plant leaves need chlorophyll during photosynthesis?

45 Correspond the organisms in list A to their breathing mechanisms in list B.

List A	List B
silver cyprinids	Lungbooks
earthworms	spiracles
crickets	moist skin
mites	gills

i) Silver cyprinids _____

ii) earthworms _____

iii) crickets _____

iv) mites _____

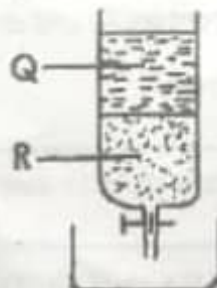
46. a) Mention any two vaccines administered to babies at zero years.

(i) _____ (ii) _____

b) How is immunization of importance to infants?

c) Give a reason why DPT vaccine is referred to as a trivalent vaccine.

47 Use the method of separating mixtures illustrated below to answer questions that follow.



a) If the mixtures in the above container is milk and cooking oil, identify the liquid at R.

b) Give a reason why the two liquids have settled on top of another as illustrated above.

c) Name the method of separating mixtures illustrated above.

d) Besides the above mixtures, mention one other mixture that can be separated using the method illustrated above.

48 a) What is seed dispersal?

b) How is seed dispersal useful to plants like guavas?

c) State the method of seed dispersal that bean plants undergo.

d) How is a jacaranda plant adapted for wind dispersal?

49 Fill in the table below using suitable words or statements.

Types of teeth	adaptation to its function.
	sharp pointed enamel
incisor	
molar	
	blunt cusps with one root.

50 a) How is the feeding of a toadstool different from that of a moss?

b) Give one similarity between a toadstool and a moss.

c) Suggest one fungus which is a raw material to the pharmaceutical industries of Uganda.

d) How is the reproduction of yeast different from that of other fungi?

51. a) Mention the mineral salt responsible for the manufacture of haemoglobin.

b) How is haemoglobin useful in the body?

c) Name the blood cells destroyed by plasmodia parasites.

d) How can a P.2 pupil increase the volume of blood in her body?

52 a) By what process of making alcohol is sugary juice turned into alcohol?

b) Why is yeast added to sugary juice when making alcohol?

c) Identify the body organ greatly destroyed by excessive drinking of alcohol.

d) Mention the type of fermentation that takes place in the absence of oxygen gas.

53 a) Suggest a reason why the bore of a clinical thermometer contains a kink.

b) Name the metal that exists as liquid at room temperature.

c) Why is the bulb of a doctor's thermometer made of a metal but not plastic?

d) Write down any one example of a thermometric liquid.

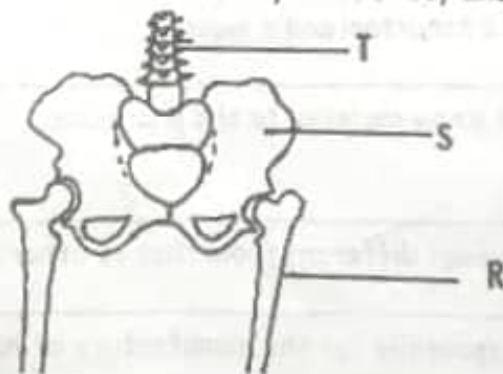
54 a) Give a reason why the filament of an electric bulb is coiled.

b) Why is a filament of an electric bulb made of tungsten?

c) Write down any two examples of gases that can be packed in the glass envelope of electric bulbs.

i) _____ ii) _____

55. Below is part of the human skeletal system. Study and use it to answer questions that follow.



a) Name part marked S on the above diagram.

b) How is part marked T useful to the human body?

c) Mention the blood cell manufactured from part labelled R.

d) Give any one supporting structure that holds the above type of skeleton.

END.