

FESBETH ACADEMY

SCIENCE BLUE PRINT

2020

TIME: 1 hr 40 min

INSTRUCTIONS TO CANDIDATES

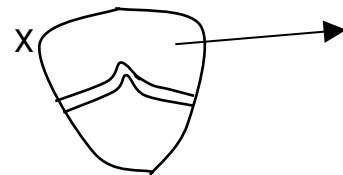
a) Write your details in the table provided below.

<i>NAME</i>	
<i>INDEX NUMBER</i>	
<i>NAME OF YOUR SCHOOL</i>	
<i>DATE</i>	

- b) For each question 1 – 50 you have been provided with four answers. The answers are marked A, B, C and D. Only one answer is correct. Choose the correct answer
- c) On the answer sheet record only one answer represented by letter provided.

d) Answers all questions.

1. The main function of a swim bladder in fish is to _____
 - A. Help the fish to float even when not swimming.
 - B. Help the fish to balance in water and propel.
 - C. Enable the fish to swim swiftly.
 - D. Reduce friction when the fish is swimming.
2. The following changes take place during the process of breathing
 - i. Diaphragm becomes dome shaped.
 - ii. Diaphragm contracts.
 - iii. Lungs shrink.
 - iv. Chest volume increases.
 - v. Chest volume decreases.
4. During which stage of HIV infection does the patient test positive with no visible signs of the infection?
 - A. Window stage
 - B. Asymptomatic stage
 - C. Symptomatic stage
 - D. Full blown stage
5. If medicine remains after taking the recommended dose it is advisable to:
 - A. Keep it safely for future use.
 - B. Continue taking it until finished.
 - C. Give it to someone with similar symptoms.
 - D. Dispose of the medicine
6. The diagram below shows a maize seed. Name the part labeled X.



- Which one of the following changes takes place during breathing out respectively?
- A. (i) ,(iii)
 - B. (v) ,(i)
 - C. (i) ,(ii)
 - D. (v) ,(iii)
3. Which of the following drugs have similar effects to tobacco when abused?
 - A. Alcohol
 - B. Cocaine
 - C. Khat
 - D. Bhang
 7. Which of the following statements about insectivorous plants is **INCORRECT?**
 - A. They trap insects with their flowers.
 - B. They grow in nitrogen deficient soils.

- C. They convert nitrogen to proteins.
 - D. They trap insects with their leaves.
8. Which one of the following structures makes up the female parts of a flower?
- A. Anther, style, ovary
 - B. Stigma, filament, ovary
 - C. Anther, filament, ovary
 - D. Stigma, style, ovary
9. Which one of the following statements is **CORRECT** about fertilization in plants?
- A. When a pollen grain falls on the stigma fertilization takes place.
 - B. The pollen tube begins growing into the style after pollination.
 - C. Fertilization takes place when a pollen grain reaches the ovary.
 - D. The male gametes are called ovules.
10. The following are steps to be carried out when modeling the solar system.
- i. Model the sun and the planets using clay as plasticine.
 - ii. Draw circles on Manila paper to show orbits.
 - iii. Mount the planets on their orbits.
 - iv. Paste the Manila paper on

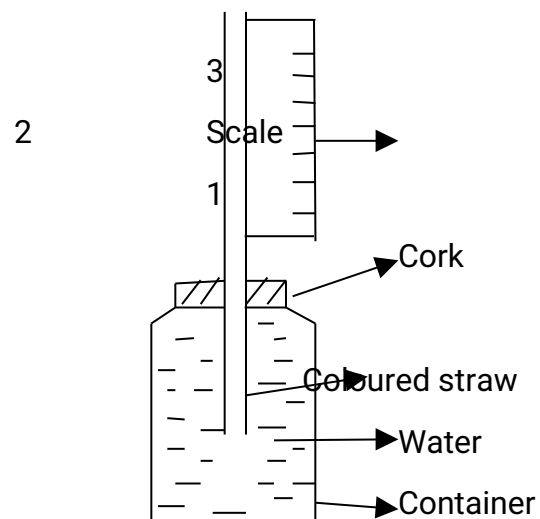
soft board using glue.

- v. Put name tags on models of planets and the sun.

Which arrangement shows the correct order from the last to the first step?

- A. (i) ,(iii),(ii),(v),(iv)
- B. (v),(iii),(ii),(iv),(i)
- C. (i),(iv),(ii),(iii),(v)
- D. (v),(ii),(i),(iii),(iv)

11. The diagram below shows an experiment that was set by pupils during a science practical lesson.



Pupils observed that the weather instrument was not functioning well. Which mistake were they likely to have made?

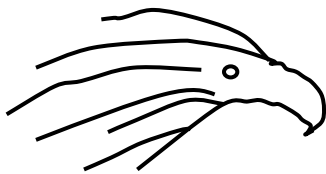
- A. Using a wrong scale.
- B. Using a thick walled glass bottle.
- C. Using a narrow tube.
- D. Using a coloured straw.

12. Which of the following livestock

parasites attack the liver and small intestines?

- A. Tapeworms and roundworms.
- B. Tapeworm and liver flukes.
- C. Hookworms and tapeworms.
- D. Roundworms and hookworms.

13. The diagram below shown a beak of a certain bird



The beak is likely to be of a

- _____
- A. Sunbird
 - B. Hen
 - C. Kite
 - D. Duck

14. In strip grazing, a farmer is likely to feed his animal on:

- A. Fodder only
- B. Fodder and concentrates
- C. Pasture and hay
- D. Pasture and concentrates

15. Which one of following statements is **TRUE** about amphibians and reptiles?

- A. Are invertebrates
- B. Are cold blooded
- C. They live in water
- D. Have constant body

temperature

16. Which one of the following statements is **CORRECT** about the circulatory system?

- A. Deoxygenated blood flows from the heart to all parts of the body.
- B. Dark red blood enters the heart through the pulmonary vein
- C. The left ventricle pumps blood to all parts of the body
- D. The right ventricle is thicker than the left ventricle

17. Which one of the following attaches itself on the wall of the uterus?

- A. Zygote
- B. Foetus
- C. Embryo
- D. Baby

18. The work of the lungs in the breathing system is to:

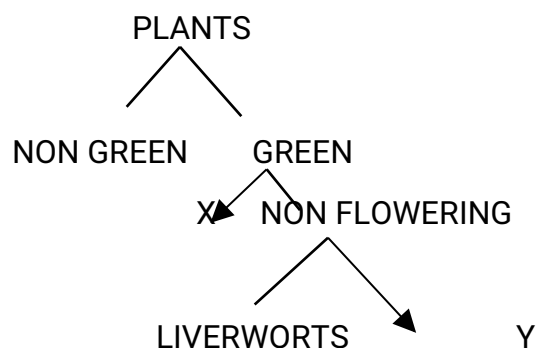
- A. Clean air
- B. Expand and contract
- C. Expel oxygen from the chest cavity
- D. Allow exchange of gases

19. The flat and sharp teeth are used for:

- A. Cutting and biting
- B. Holding and tearing
- C. Chewing and grinding
- D. Crushing and grinding

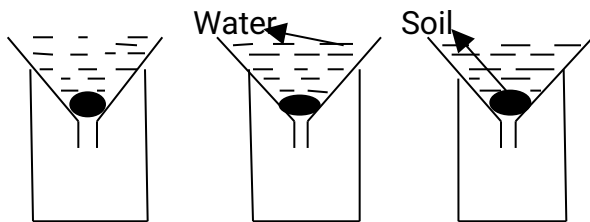
20. Which one of the following pair of effects of drugs consists of social effects of drug only?
- Rape and addiction.
 - Truancy and marital conflicts.
 - Withdrawal symptoms and stealing.
 - Coma and loss of concentration.
21. Three of the following are requirements of maintaining strong teeth ***EXCEPT***?
- Eating balance diet
 - Brushing teeth regularly and properly
 - Exercising teeth by eating hard foods such as chocolates and sweets
 - Flossing teeth regularly
22. Which one of the following is the most effective way of preventing the spread of HIV/AIDS from mother to child?
- Having voluntary counseling and testing
 - Avoiding breastfeeding
 - Being faithful
 - Creating public awareness
23. Which one of the following is NOT a disadvantage of using hard water?
- May have a pleasant taste
 - Wastes soap
 - Wastes time and energy

- Makes cleaning hard
24. Which one of the following is not a recreational use of water?
- Making fountains
 - Surfing
 - Swimming
 - Watching fountains
25. Typhoid can be controlled by:
- Covering pit latrines
 - Wearing protective clothing
 - Draining stagnant water
 - Drinking boiled water
26. Which of the following shows using water sparingly?
- Water in cleaning clothes is used to clean the floor
 - Treating water so that it becomes safe for use
 - Closing taps when not in use
 - Trapping rain water from the roofs of a house and storing in tanks
27. Which groups of plants can be represented by Y and X respectively in the illustration below?



- A. Yeast, mushroom
- B. Pine, flowering
- C. Flowering, pine
- D. Algae, non flowering

28. Std five pupils added equal amount of water to three equal amounts of soil J, K, L in funnel as shown below.



J K L

After 10 minutes the pupils measured the amount of water that had drained through each sample and the results were as shown below.

Soil sample	J	K	L
Amount of water collected (cm ³)	28	19	3

Which of the following statement is the **CORRECT** conclusion from the results obtained?

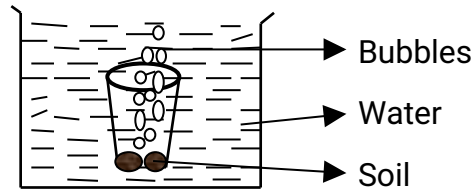
- A. J has larger particles than L
- B. L has larger particles than J and K

- C. K has larger particles than J and L
- D. L has smaller particles than K

29. Which one of the following pairs contains only macro nutrients?

- A. Potassium, calcium, boron
- B. Magnesium, phosphorus, nitrogen
- C. Carbon, magnesium, sulphur
- D. Oxygen, zinc, calcium

30. Bahati placed a lump of soil in a glass containing water. He then observed bubbles coming to the surface of the water.



After the bubbles stopped coming out, which one of the following statements would be **CORRECT** to make;

- A. The mass of the soil increased.
- B. The volume of the soil remained same.
- C. The volume of the water increased
- D. The volume of water decreased

31. Which of the following methods of food preservation is food preserved by making the bacteria inactive?

- A. Drying
- B. Smoking

- C. Canning
- D. Use of low temperatures

32. Which pairs of diseases given below are caused by lack of minerals in the body?

- A. Marasmus and kwashiorkor
- B. Anaemia and rickets
- C. Rickets and marasmus
- D. Anaemia and kwashiorkor

33. Which one of the following is not a main reason for including water to the diet?

- A. Helps in digestion of food
- B. Helps in transportation of indigested food.
- C. Helps in transportation of digested food
- D. Helps in transportation of waste products.

34. The following materials were collected by pupils during a science practical lesson.

- a) Water in basin
- b) A clean mirror
- c) A white board

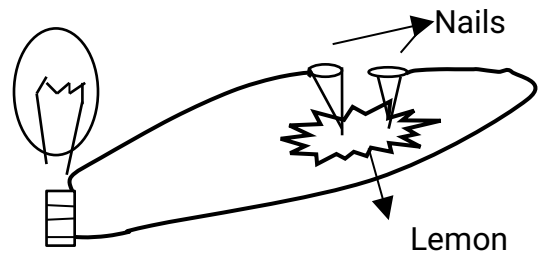
Which aspect of light were they investigating?

- A. Dispersion of light
- B. Refraction of light
- C. Reflection of light
- D. How light travels

35. Which one of the following pairs of materials allows current electricity to pass through?

- A. Steel spoon and shoe sole
- B. Pin and paper
- C. Carbon rod and razor
- D. Glass and coin

36. Examine the set up below and state what is not likely to happen in the circuit.



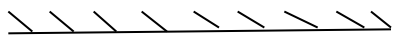
- A. Chemical energy will be changed to electrical energy.
- B. Filament will glow
- C. Heat energy will come after light energy.
- D. Bulb will light.

37. Which one of the following groups of materials is opaque only?

- A. Oiled paper, frosted glass, sky lights.
- B. Clear water, clear glass, clear air
- C. Mirror, muddy water, milk
- D. Oiled paper, air, metal

38. The diagram below represents a set up to investigate formation of images.

● S ● V

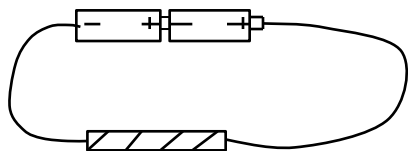


● T ● U

If the image is at position V, the observer is at position _____

- A. S
- B. T
- C. U
- D. V

39. Study the diagram below.



In order to reduce the power of a magnet in the nail one should _____

- A. Reduce the number of coils.
- B. Increase the number of coils.
- C. Use more dry cells.
- D. Put the switch closed all through.

40. Heat reaches a person settled by the fire **MAINLY** through _____

- A. Radiation only
- B. Convection only
- C. Conduction and convection
- D. Radiation and convection

41. Which one of the following groups consists of non – magnetic materials only?

- A. Paper clip, razor blade, steel wool.
- B. Sewing needle, metal scissors, staple pins.
- C. Cobalt rod, brass bowl, copper ring.
- D. Silver coin, aluminium plate, zinc strip

42. The following are substances mixed with water in drinking glasses labeled K, L, M, and N by some pupils.

K – Chalk powder

L – Salt

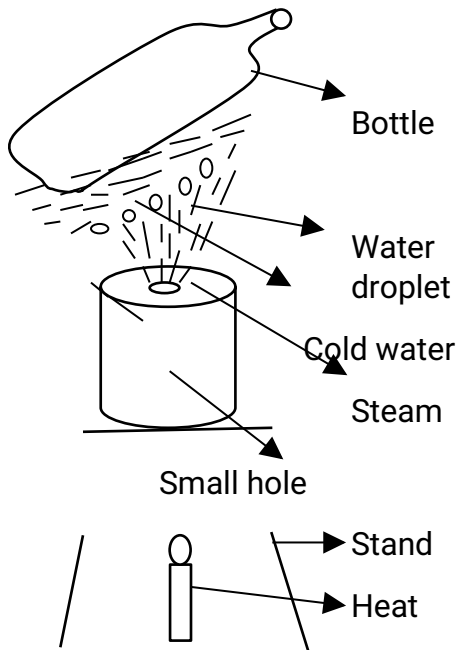
M – Wood ash

N – Glucose

Which two glasses contain substances that will form solutions when the mixture is stirred well?

- A. K and M
- B. L and N
- C. K and N
- D. L and M

43. The diagram below represents a set up that is used to demonstrate a certain process involved in change of state of matter.



The water droplets appear on the surface of the bottle due to_____

- A. Freezing and condensation.
- B. Evaporation and melting.
- C. Melting and freezing.
- D. Evaporation and condensation.

44. Liquids and gases have no definite:

- A. Volumes but have definite
- D. Passing the string through the pulley

47. A road winding up a hill makes work easier by_____

- A. Decreasing the effort distance
- B. Decreasing the load distance
- C. Decreasing the slope
- D. Changing direction of the force

48. The best method of managing waste

mass.

- B. Shape but have definite volume.
- C. Volumes but have definite shape.
- D. Shape but have definite mass.

45. Which lever given below has the effort between load and fulcrum.

- A. Wheelbarrow
- B. Spade
- C. Claw hammer
- D. Crowbar

46. Which one of the following is the second step when investigating the force required lifting the load using a single fixed pulley?

- A. Fixing the pulley on the support
- B. Pulling the spring balance and measuring
- C. Tying the load with a string

in urban centres is by_____

- A. Recycling
- B. Use of local authority
- C. Reducing
- D. Converting into compost

49. Excessive use of pesticides mostly pollute_____

- A. Air
- B. Soil

C. Water

D. Air and soil

50. The following are effects of force that opposes motion

EXCEPT _____

A. It can be reduced by streamlining.

B. It affects the speed of a moving object.

C. It causes wear and tear

D. It changes direction of a moving object