

# ACADEMIC BREAKTHROUGH SERIES

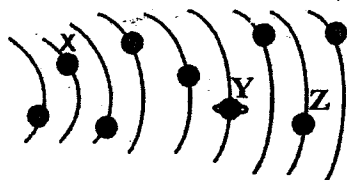
**STD. 7 - YEAR: 2021**

SASON  
002

## SCIENCE

Time: 1 Hr 40 Min.

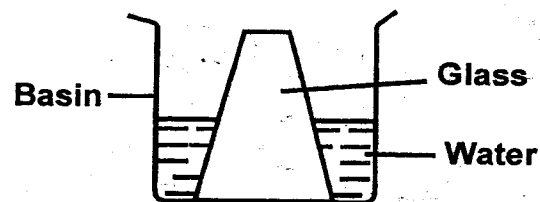
1. The diagram below represents the solar system.



The plants labelled X Y and Z respectively are \_\_\_\_\_

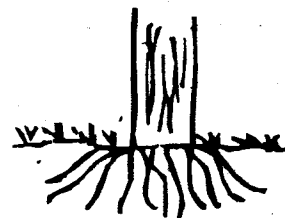
- A. Venus, Mars, Saturn  
B. Venus, Saturn, Neptune  
C. Earth, Jupiter, Neptune  
D. Mercury, Saturn, Neptune
2. The texture of a soil type depends on the \_\_\_\_\_  
A. amount of mineral particles in the soil  
B. organic matter in the soil  
C. size of soil particles  
D. amount of water in the soil
3. Wearing protective clothes while working in a rice farm can prevent one from contracting  
A. Typhoid  
B. Bilharzia and Cholera  
C. Malaria and Typhoid  
D. Bilharzia
4. Which of the following is **NOT** a reason why drugs should be stored in their properly labelled containers?  
A. To avoid getting expired  
B. To avoid getting spoilt  
C. To avoid contamination  
D. To increase its damage
5. Which one of the following processes involve absorption of heat from the surrounding?  
A. Evaporation and condensation  
B. Melting and freezing  
C. Freezing and condensation  
D. Evaporation and melting
6. Which one of the following groups consists of only plants with fibrous roots/  
A. Wheat, carrots, beans  
B. Sorghum, millet, maize  
C. Beans, millet, wheat  
D. Cowpeas, beans, carrots

7. Nusaiba inverted a glass over water as shown. Water did **NOT** enter the glass.



To make water enter the glass, Nusaiba should

- A. make a hole at the bottom of the basin  
B. add water in the basin  
C. make a hole at the bottom of the glass  
D. put a dry paper at the bottom of the glass
8. Heat from the sun reaches us by \_\_\_\_\_  
A. radiation                      B. conduction  
C. convection                    D. evaporation
9. Plants lose water by the process called \_\_\_\_\_  
A. condensation                B. transpiration  
C. photosynthesis               D. transportation
10. Which one of the following has a **moist skin**?  
A. Frog                              B. Duck-billed platypus  
C. Alligator                        D. Crocodile
11. Reflected sound is called \_\_\_\_\_  
A. echo                              B. pitch  
C. volume                         D. reflection
12. What type of roots are shown in the diagram below?

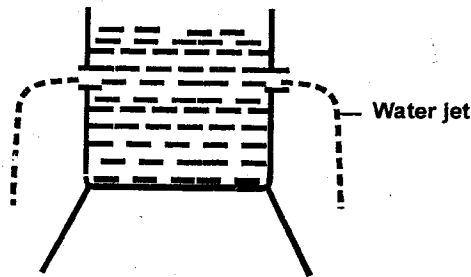


- A. Breathing roots                B. Fibrous roots  
C. Tap roots                        D. Clasping roots
13. Which one of the following parts of a seed form the embryo?  
A. Cotyledon, micropyle  
B. Radical, plumule  
C. Testa, plumule  
D. Micropyle, seed coat

14. Which stage of HIV infection is the immune system almost completely destroyed and more opportunistic infections?

- A. Symptomatic stage
- B. Asymptomatic stage
- C. Window stage
- D. Full blown AIDS

15. The diagram below shows that pressure in liquids \_\_\_\_\_



- A. is equal at the same depth
- B. increases with depth
- C. is exerted in all directions
- D. makes water to move out in jets

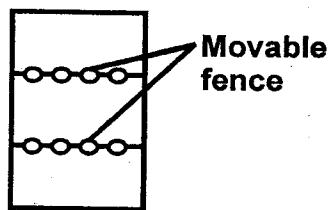
16. Which one of the following is **NOT** necessary in germination?

- A. Moisture
- B. Oxygen
- C. Light
- D. Warmth

17. Which one of the following pair consists of planets with the longest orbits?

- A. Venus and Jupiter
- B. Mars and Saturn
- C. Neptune and Uranus
- D. Earth and Saturn

18. Which method of grazing is represented by the diagram below?



- A. Stall feeding
- B. Paddock
- C. Strip grazing
- D. Tethering

19. Which one of the following vaccines is **NOT** introduced into the body through an injection?

- A. BCG
- B. Measles
- C. DPT
- D. Polio

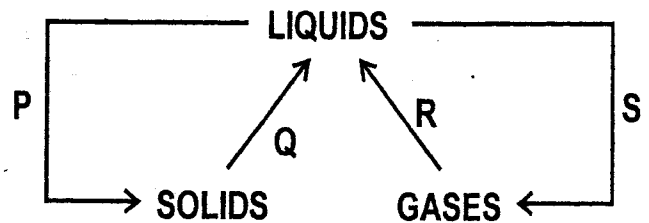
20. Bile is a digestive juice produced in the \_\_\_\_\_

- A. liver
- B. intestines
- C. pancreas
- D. stomach

21. Trachea is kept open by the \_\_\_\_\_

- A. C-shaped rings
- B. diaphragm
- C. bronchus
- D. hair and mucus

22. The diagram below shows the changes of states of matter.



The process P and S are \_\_\_\_\_ and \_\_\_\_\_ respectively.

- A. condensation and freezing
- B. condensation and melting
- C. freezing and evaporation
- D. melting and condensation

23. Which one of the following instruments is used by doctors to measure **heart beat rate** of patients in hospitals?

- A. Stethoscope
- B. Thermometer
- C. Microscope
- D. Periscope

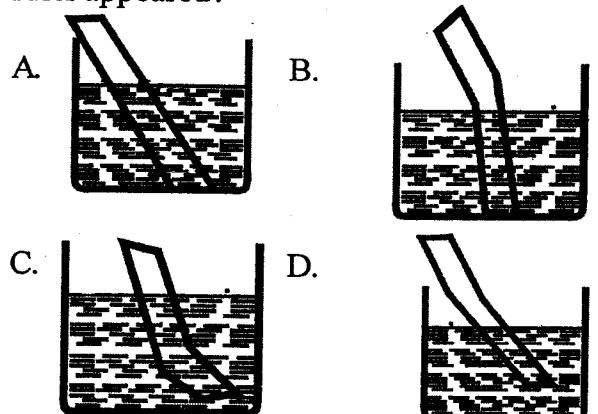
24. Which one of the following group of animals below are invertebrates?

- A. Dog, frog, platypus
- B. Spider, scorpion, crab
- C. Snail, bird, lizard
- D. Snake, frog, toad

25. Grains such as rice, millet and wheat can **BEST** be preserved by \_\_\_\_\_

- A. use of low temperatures
- B. use of chemicals
- C. smoking
- D. use of ashes

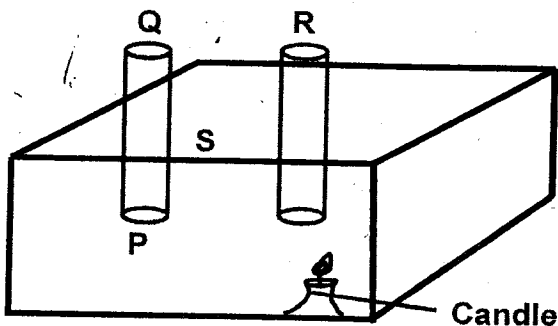
26. A standard six pupil put a ruler in a glass of water. Which of the following shows how the ruler appeared?



27. Which one of the following plants does **NOT** make its own food?
- Pine
  - Maize
  - Sisal
  - Puffball
28. A class four of Kikambala primary school went for a nature walk one afternoon and saw a cloud with the following characteristics.
- Have a flat base.
  - Indicate fine weather.
  - Found high in the sky.

Which type of clouds did they see?

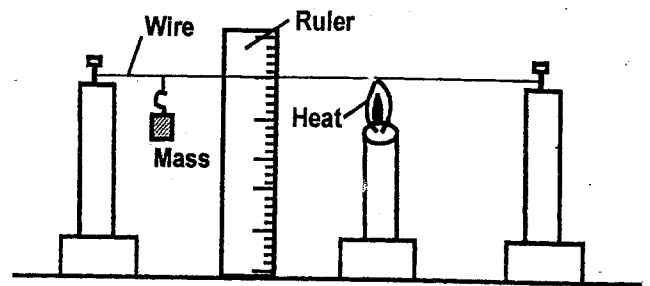
- Cumulus
  - Stratus
  - Nimbus
  - Cirrus
29. The component of blood that is attacked and destroyed by the HIV virus is \_\_\_\_\_
- platelets
  - white blood cells
  - plasma
  - red blood cells
30. Which one of the following signs is **NOT** for Tuberculosis?
- Prolonged cough
  - Severe abdominal pain
  - Sweating at night
  - Loss of weight
31. Which one of the following is **NOT** a sea mammal?
- |          |            |
|----------|------------|
| A. Shark | B. Seal    |
| C. Whale | D. Dolphin |
32. The experiment below was carried out by class 5 of Barani primary school.



For the demonstration to work effectively the burning rag should be placed at point \_\_\_\_\_

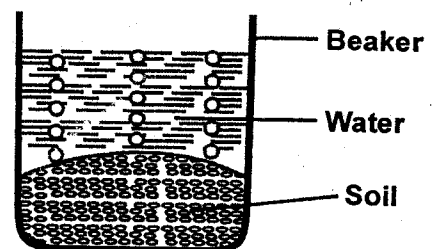
- P
- S
- R
- Q

33. The diagram below represents a set up that can be used to demonstrate a certain property of metals.



Which property of metals was being demonstrated?

- Metals expand when heated
  - Metals are pulled down after heating
  - Solids are the only conductors of heat
  - Metals bend when heated
34. Which one of the following consists only of substances that have neither definite shape nor definite volume?
- Carbon dioxide, oxygen, water vapour
  - Stone, clay, toothpaste
  - Flour, cement, kerosene
  - Oil, nitrogen, glue
35. Standard 7 pupils at Mtomondoni primary carried out an experiment as shown below.



They were trying to investigate the presence of \_\_\_\_\_

- soil in water
  - bubbles in the soil
  - air in the soil
  - bubbles in the air
36. Which one of the following is **NOT** a use of light?
- Photocopying
  - Communication
  - Warming
  - Photosynthesis
37. Which one of the following weed is edible?
- Datura
  - Pig weed
  - Sodom apple
  - Couch grass

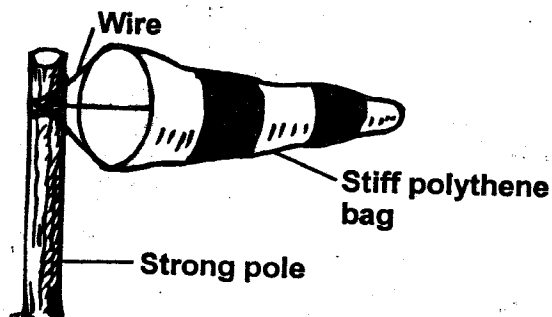
38. Which one of the following is made up of the male parts of a flower only?

- A. Style, filament, ovary
- B. Pollen grains, filament, anthers
- C. Pollen grains, filament, style
- D. Stigma, ovules, ovary

39. Force is measured in \_\_\_\_\_

- A. kilograms
- B. grammes
- C. newton
- D. tonnes

40. The diagram below shows a certain weather instrument.



Which one of the following statements is **NOT** correct about the weather instrument above?

- A. It is located in the air stripes
- B. It is painted black and white for visibility
- C. It has two openings
- D. It has a wider tail than its mouth

41. Three of the following are true about a rain gauge. Which one is **FALSE**?

- A. Rainfall amount is measured in millimetres
- B. It should be dug into the ground to prevent evaporation of collected water
- C. Collecting bottle should be placed 30 cm above the ground
- D. Should be kept under trees

42. The main source of heat and light energy on earth is the \_\_\_\_\_

- A. fire
- B. sun
- C. moon
- D. glow worm

43. Which one of the following is **NOT** a method of grazing?

- A. Stall feeding
- B. Rotational grazing
- C. Herding
- D. Paddocking

44. Which one of the following organs is **NOT** involved in breathing?

- A. Wind pipe
- B. Diaphragm
- C. Bronchioles
- D. Oesophagus

45. The other name for artificial teeth is \_\_\_\_\_

- A. enamel
- B. dentures
- C. dental floss
- D. pulp

46. Below are the description of a certain type of teeth.

- i) *It has one root.*
- ii) *It is used for tearing food.*
- iii) *It is long and pointed.*

The tooth is likely to be \_\_\_\_\_

- A. premolar
- B. molar
- C. incisors
- D. canine

47. Which one of the following is **NOT** a reason as to why animals move?

- A. Search for food
- B. Escape their enemies
- C. Search for better places to live
- D. Find their enemies

48. Which one of the following tools is **NOT** correctly matched with its function?

- A. Panga - cutting tree branches
- B. Axe - driving in nails
- C. Jembe - digging out weeds
- D. File - sharpening cutting tools

49. The tendency of a moving object or a stationary object to resist change of state is called \_\_\_\_\_

- A. friction
- B. gravity
- C. inertia
- D. force

50. The component of air that makes up to 0.97% of air by volume is used in \_\_\_\_\_

- A. fire extinguishers
- B. electric bulbs and tubes
- C. germination
- D. making protein