

1. The jelly-like substance that surrounds the nucleus is called
 - a. Nucleus
 - b. Cell membrane
 - c. Cytoplasm
 - d. Chloroplast
2. The purpose of scale like or spin like leaves in the deserted plants is responsible for
 - a. Reduce loss of water by transpiration
 - b. Increase the rate of photosynthesis
 - c. Increased transportation of water throughout the plant.
 - d. Adjust in less space.
3. Addition of nitrogenous fertilizers replenishes the soil with adequate amount of nitrogen. But cultivation of plants like Pulses, green gram, Bengal gram, black gram, etc. don't require addition of much external fertilizers because:
 - a. These plants shares symbiotic relationship with Rhizobium that converts atmospheric nitrogen and replenishes the soil.
 - b. These plants do not require nitrogen as nutrient.
 - c. these plants can produce nitrogen by themselves and can replenish the soil.
 - d. None of these
4. To the starch solution, small amount of saliva is added, then few drops of another sample X is added the color of the mixture turns into blue black. Identify the solution X, which changed color of the starch solution?
 - a. HCl
 - b. Iodine Solution
 - c. H_2SO_4
 - d. Salt Solution
5. A person is with Cholelithiasis refers to the presence in his gall bladder. which components of food is difficult for him to digest?
 - a. Fats
 - b. Carbohydrates
 - c. Proteins
 - d. Vitamins

6. Deficiency of which of the following component related to digestive system is responsible for Diabetes?

- a. Insulin
- b. Bile juice
- c. Hydrochloric acid
- d. None of these

7. Material commonly used for making non-stick cookware is:

- a. PVC
- b. Acrylic
- c. Teflon
- d. PET

8. What is used instead of mercury in digital thermometer?

- a. Thermoresistor
- b. Nitrogen
- c. Alcohol
- d. Water

9. Which thermometer should be used to measure the temperature of a chemical reaction?

- a. Laboratory Thermometer
- b. Maximum Thermometer
- c. Digital Thermometer
- d. Clinical Thermometer

10. What is the correct way to use a laboratory thermometer?





11. When a petal of China rose is placed in a solution X, the color of the petal changes into dark pink. But when a petal of China rose is placed into solution Y, it turned into green. Identify the nature of solutions X and Y.

- a. X= acid; Y= base
- b. X= base; Y= acid
- c. X= base; Y= neutral
- d. X= neutral; Y= acid

12. Raman is a farmer. For the past three months the yield of crops was not that good. On testing the soil, the expert prescribed him to add ammonium sulphate to the soil in order to receive high yield of crops. What was the nature of the soil of his field?

- a. Acidic
- b. Neutral
- c. Basic
- d. None of them

13. Which of the following is a characteristic associated with all Chemical changes?

- a. It involves change in state and temperature.
- b. It involves change in shape.
- c. The change can be reversed.
- d. It involves the formation of a new substance.

14. A student reacted Mg with HCl. When he brought a matchstick close to the mouth of the test tube it burnt with a pop sound. What could have been the reason?

- a. Production of Hydrogen.
- b. Production of carbon dioxide.
- c. Production of chlorine
- d. Presence of hydrochloric acid

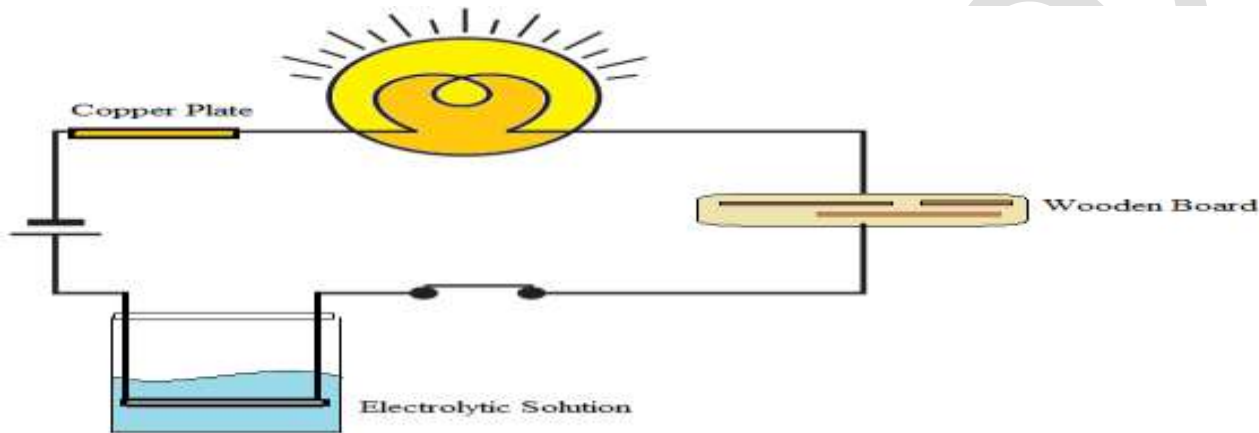
15. Which of the following is not a characteristic of the species adapted to cold climate.
- a. Thick and white fur
 - b. Layer of fats under the skin
 - c. Wide and large paws
 - d. Large ears
16. Which of the following is the characteristic of red eyed frog found in tropical rainforest?
- a. Sticky pads on their feet.
 - b. Long tail.
 - c. paws on their feet.
 - d. Thick skin
17. Which of the following is not the characteristic of lion tailed macaque?
- a. Presence of silver white mane.
 - b. Feeds on fruits and seeds.
 - c. Feeds on insects found in the bark of trees.
 - d. Strong sense of smell and large ears.
18. The reason for circulation of wind from the poles to the warmer latitudes is:
- a. Uneven heating of land and water
 - b. Uneven heating between the equator and the poles
 - c. Decrease in atmospheric pressure near the latitudes
 - d. Increase in atmospheric pressure near the latitudes
19. The rotting dead matter in the soil is called _____
- a. Humus
 - b. Protein
 - c. Bedrock
 - d. Topsoil

20. Let the time taken for 100 mL of water to percolate be 50 minutes. Then calculate the rate of percolation.
- 1 mL/Min
 - 2 mL/Min
 - 5 mL/Min
 - 3 mL/Min
21. Yeast is the primary component in the beer and wine industry because:
- It is a bacteria.
 - It yields alcohol.
 - It produces carbon-dioxide during respiration.
 - None of these.
22. Red colour of the RBC is due to
- Hemoglobin
 - Platelets
 - WBC
 - Cytosine
23. Rohan got injured and started bleeding. But after sometime the bleeding stopped with a hard red layer over the injury. Her mom said that it was a blood clot. Which of the following circulatory component is responsible for this?
- Hemoglobin
 - Cytosine
 - Platelets
 - WBC
24. The transfer of pollen grains from the anther of a flower to the stigma of the same flower is called
- Fertilization
 - Self-pollination
 - Fission
 - Fusion

25. Raman walks a distance of 3 km from his house in 30 minutes and comes back walking in 20 minutes. His average speed in km/h is

- a. 7.2
- b. 8
- c. 10
- d. 5

26. A student made the following setup using a new bulb, conducting wires, and a 3V battery but the bulb did not glow. Identify the reason.



- i. Bulb is fused
 - ii. Copper plate is rusted.
 - iii. Use of wooden board.
- a. (i) and (ii) only
 - b. (iii) only
 - c. (i) and (iii) only
 - d. any of (i), (ii) and (iii)

27. A student tried to get the image of her pencil box using a convex mirror. The image she obtained would be

- a. virtual, erect and enlarged.
- b. virtual, erect and diminished.
- c. real, erect and enlarged.
- d. virtual, inverted and diminished

28. The distance between the image and the object placed at a distance of 1m in front of a plane mirror will be:

- a 2m
- b 1m
- c 0.5m
- d 0.25m

29. A student was given a convex mirror, a concave mirror, a convex lens and a concave lens. Which would help him get an inverted image?

- a only concave lens and convex lens.
- b only concave mirror and convex mirror.
- c only concave mirror and convex lens.
- d only convex mirror and concave lens.

30. Identify the products of waste water?

- a. Biogas
- b. Sludge
- c. Both a and b
- d. Aerator

31. Which of the following gas released by factories is responsible for Global Warming?

- a. Carbon monoxide
- b. Sulphur dioxide
- c. Nitrous oxide
- d. All of the above