

CBSE QUESTION PAPER

CLASS-X

SCIENCE

Section - A

Q.1. Name the hormone that controls the rate of respiration. Also name the part of the

brain responsible for controlling respiration. *1 Mark*

Q.2. Why is it advised not to use copper or brass vessels to store pickles or curd? *1 Mark*

Q.3. which is having more resistance: A 100 W bulb or a 60 W bulb? *1 Mark*

Q.4. Write the balance chemical equation for the chemical reaction between Manganese dioxide and Aluminum powder. What happens if Manganese powder is heated with Aluminum oxide? *2 Marks*

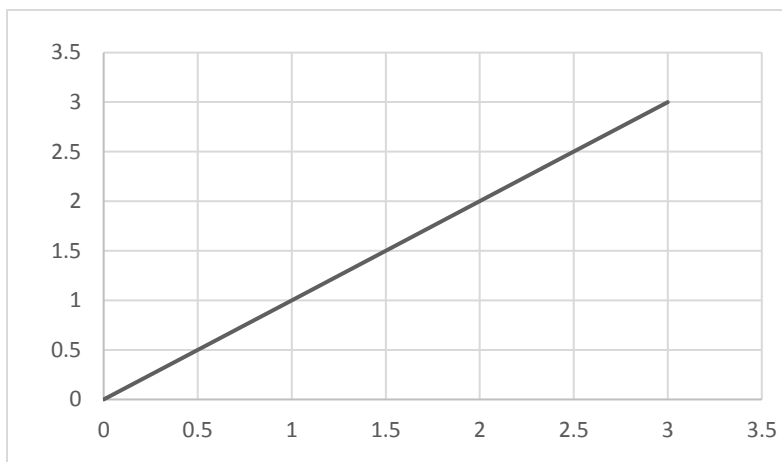
Q.5. A white powder is added while baking breads and cakes to make them soft and fluffy. What is the name of the powder? What are the main ingredients in it? What are the functions of each ingredient? *2 Marks*

Q.6. Write any two causes that may damage the kidney of a person. *2 Marks*

Q.7. Explain the significance of peristaltic movement that occurs all along the gut during digestion. *2 Marks*

Q.8. You are given two solar cookers, one with a plane mirror as reflector and the other with concave mirror as reflector. Which one is more efficient? Give reason for your answer. State one more use of concave mirror. *3 Marks*

Q.9. State the law that relates current through a conductor and the potential difference between its ends. Represent the law mathematically. Represent graphically, the variation of current I as a function of potential difference V . 3 Marks



Q.10. In a circuit, the two resistance wires A and B are of same length and same material, but A is thicker than B. Which ammeter A1 or A2 will indicate higher reading for current? Give reason. 3 Marks

Q.11. A student while studying the force experienced by a current carrying conductor in a magnetic field records the following observations. 3 Marks

- (a) The force experienced by the conductor increases as the current is increased
- (b) The force experienced by the conductor decreases as the strength of the magnetic field is increased.
- (c) Which of the two observations is correct and why? What is resistance of a conductor due to?

Q.12. A solution of a substance 'X' is used for white washing. 3 Marks

- (i) Name the substance 'X' and write its formula.
- (ii) Write the reaction of the substance 'X' named in (i) above with water.
- (iii) Write the balanced equation for the following chemical reaction:

**Q.13. What is the main ore of mercury? Explain, how mercury is obtained from this ore?
Also write the reaction involved in the extraction 3 Marks**

Q.14. (a) Define 'water of crystallization'. 3 Marks

(b) Give two examples of substances having water of crystallization. Write their chemical formula

Q.15. (a) Using a simple experiment, how can you prove that Magnesium is placed above Zinc in the reactivity series?

(b) Why copper metal cannot liberate Hydrogen when reacting with dil. HCl?

3 Marks

Q.16. Draw a diagram of human brain and label any four parts. Write one function each of any two parts. 3 Marks

Q.17. What is chemotropism? Give one example. Name any two plant hormones and mention their functions. 3 Marks

Q.18. Write one feature which is common to each of the following pairs of terms: 3 Marks

(i) Glycogen and starch

(ii) Chlorophyll and haemoglobin

(iii) Arteries and veins

Q.19. In a class-room, there were four or five students who were not able to read the material written on black board. The other students of class helped them to sit at the front seat, so that they can also read the material written on blackboard What can be the reason behind it, what will you recommend these students and what precautions you will insist them? 3 Marks

Q.20. Two identical resistors, each of resistance 50Ω are connected (i) in series (ii) in parallel, in turn; to a battery of 10 V . Calculate the power consumed in the combination of resistor in the two cases and ratio of the power consumed in the combination of resistor in the two cases. *5 Marks*

OR

Two resistors of resistance 3Ω and 6Ω respectively are connected to a battery of 6 V so as to have: Maximum resistance and maximum current. Suggest the probable method of resistor combination and the corresponding current that will flow through the circuit. Which sort of connection is preferable in house hold circuits? Give one reason.

Q.21. (a) Name the process by which sodium hydroxide is prepared from sodium Chloride? Why it is called so process and write down the balanced chemical equation. *5 Marks*

(b) What will be the pH of the following salts?

(i) Salt made of strong acid and strong base

(ii) Salt made of strong acid and weak base

OR

(a) A milkman adds a very small amount of baking soda to fresh milk.

(i) Why does he shift the pH of the fresh milk from 6 to slightly alkaline?

(ii) Why does this milk take a long time to set as curd?

(b) What is a neutralization reaction? Give two examples.

Q.22. (a) What are amphoteric oxides? Give two examples. *5 Marks*

(b) Metals such as Sodium and Potassium are kept immersed in Kerosene, why?

(c) Give the balanced chemical equation for the reaction between Al and steam.

(d) Name a non metal

(i) Which is a liquid at room temperature?

(ii) Which is lustrous?

OR

(a) What are the main two allotropes of carbon? Distinguish these two allotropes on the basis of hardness and electrical conduction.

(b) Why Aluminium articles have a longer life and attractive finish compared to many other metals?

(c) Explain the following terms

(i) Ore

(ii) Gangue

(d) What is common feature in the electronic configuration of metal atom?

Q.23. (a) Draw diagram of human alimentary canal and label the following *5 Marks*

(i) Part in which starch digestion starts

(ii) Part in which bile is stored

(iii) Part in which nutrients are absorbed

(iv) Part in which water is absorbed

(b) Mention the role of hydrochloric acid in the stomach.

(c) What function is served by the following:

(i) Gastric sphincter

(ii) Anal sphincter

OR

(a) Draw a diagram of respiratory system and label any four parts of it.

(b) What are alveoli? Mention their role in respiration.

Q.24. Briefly explain an activity to plot the magnetic field lines around a straight current carrying conductor. Sketch the field pattern for the same, specifying current and field directions. What happens to this field *5 Marks*

(i) If the strength of the current is decreased?

(ii) If the direction of the current is reversed?

OR

Briefly explain an activity to plot the.

Sketch the field pattern for the same specifying field directions.

A region 'A' has magnetic field lines relatively closer than another region 'B'. Which region has stronger field? Give reason to support your answer.

SECTION - B

Q.25. Two colours seen at the extreme ends of pH chart are *1 Mark*

- (a) red and blue
- (b) red and green
- (c) green and blue
- (d) orange and black

Q.26. A colourless and odourless gas is liberated when hydrochloric acid is added to a solution of washing soda. The name of the gas is: *1 Mark*

- (a) Carbon dioxide.
- (b) Nitrogen dioxide.
- (c) Sulphur dioxide.
- (d) Sulphur trioxide

Q.27. When crystals of FeSO_4 are strongly heated the residue obtained is *1 Mark*

- (a) red in colour.
- (b) blue in colour.
- (c) green in colour.
- (d) colourless.

Q.28. Reddish brown deposit observed on iron nails, when these are kept in aqueous solution of copper sulphate solution is that of *1 Mark*

- (a) Cu_2O
- (b) CuO
- (c) Cu
- (d) CuS

Q.29. Rahul took some zinc granules in a test tube and added dilute HCl to it. He observed that the colour of the zinc granules changed to *1 Mark*

- (a) Yellow
- (b) brown
- (c) black
- (d) white

Q.30. What is the least count of the following voltmeter? *1 Mark*



- (a) 0.5 V
- (b) 0.1 V
- (c) 0.05 V
- (d) 0.005 V

Q.31. Resistance of a conductor depends on *1 Mark*

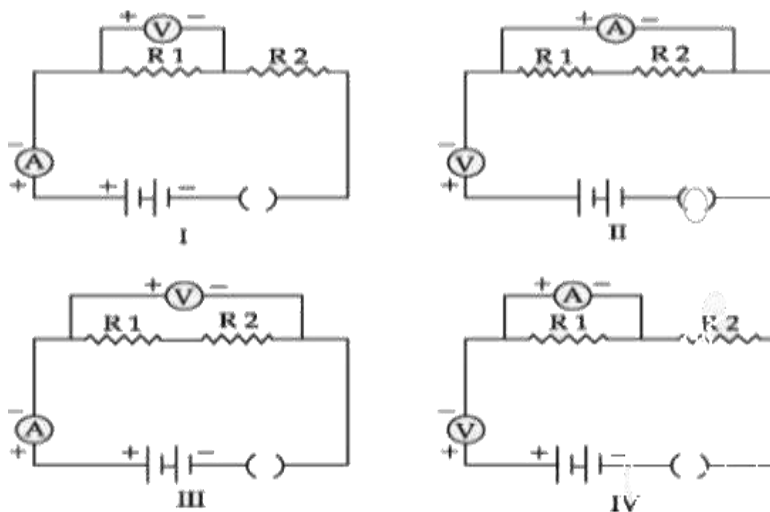
- (a) Its length
- (b) Area of cross section
- (c) Material of the conductor
- (d) All the above

Q.32. Four students measured the following readings by observing, the position of pointer of voltmeter *1 Mark*



- (a) 2.5V
- (b) 2.0 V
- (c) 2.2 V
- (d) 2.4 V

Q.33 In the experiment on finding equivalent resistance of two resistors, connected in series, four students I, II, III and IV set up the circuit as shown below: *1 Mark*



The correct connections have been made by student

- (a) I
- (b) II
- (c) III
- (d) IV

Q.34. In domestic circuits the colour of neutral wire is: *1 Mark*

- (a) Black
- (b) red
- (c) green
- (d) orange

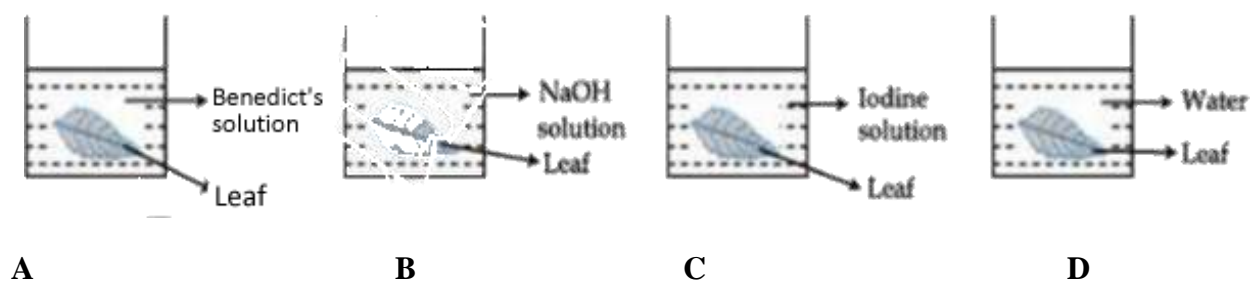
Q.35. If two resistances of 2 ohm each are connected in parallel , the equivalent resistance is *1 Mark*

- (a) 1 ohm
- (b) 2 ohm
- (c) 4 ohm
- (d) 8 ohm

Q.36. while performing the experiment to study the dependence of current on potential difference If the circuit that is used to measure current and voltage is kept on for a long time then *1 Mark*

- (a) The voltmeter will start giving wrong readings
- (b) The ammeter's zero error will change
- (c) The resistor will get heated up changing the value of R
- (d) The potential difference of the cell will change.

Q.37. Figures A, B, C and D show leaves that have been boiled in alcohol, placed in four beakers containing liquids as labelled. *1 Mark*



In which one of the above a positive test for presence of starch would be obtained?

- (a) A
- (b) B
- (c) C
- (d) D

Q.38. A student was asked to focus a permanent slide under the high power of a microscope. This involved the following steps which have not been written in a correct sequence: *1 Mark*

- (A) Place the slide on the stage
- (B) Clean the microscope and lenses
- (C) Focus the material with coarse adjustment
- (D) Place the low power objective lens above the slide
- (E) Sharpen the focus with fine adjustment
- (F) Bring high power objective lens over the slide

Which one of the following is the correct sequence of steps for focusing the slide under high power?

- (a) B,A,C,E,D,F
- (b) B,A,C,D,E,F
- (c) A,B,F,C,D,E
- (d) B,A,D,C,F,E

Q.39. Sequence in preparing a temporary mount is *1 Mark*

- (a) Staining, mounting, putting cover slide
- (b) Staining, putting cover slip, mounting
- (c) Putting coverslip, staining, mounting
- (d) Mounting, staining, putting cover slip

Q.40. Stomata plays an important role in *1 Mark*

- (a) Respiration
- (b) photosynthesis
- (c) transpiration
- (d) all of the above

Q.41. we test for starch and not glucose to prove that photosynthesis has taken place because *1 Mark*

- (a) Glucose is not produced during photosynthesis in variegated leaves.
- (b) Glucose formed during photosynthesis get stored as sucrose.
- (c) Glucose formed during photosynthesis get stored as starch.
- (d) Glucose is a stable product and cannot be tested.

Q.42. For the experiment “light is necessary for photosynthesis”, the potted plant is first kept in darkness for a day. This is to *1 Mark*

- (a) deactivate the chloroplast**
- (b) destarch leaves**
- (c) activate chloroplast**
- (d) prepare leaves for photosynthesis.**