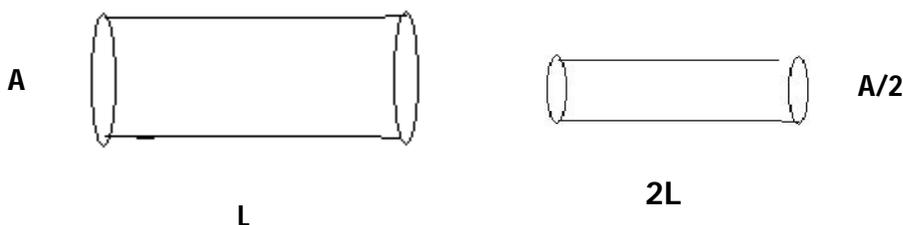


- Q1. Draw the following symbols: (1)
a) battery b) open key c) resistor d) bulb
- Q2. What is the color of live, earth and neutral wire? (1)
- Q3. On What basis is a chemical reaction balanced? (1)
- Q4. Given below are the pH of four different liquids, which of these is highly basic and which is moderately acidic (1)
(a) 7.0 (b) 14.0 (c) 1.2 (d) 4.0
- Q5. Name a protease found in human alimentary canal. (1)
- Q6. Write one adaptive feature of small intestine which facilitates absorption of digested food. (1)
- Q7. List two main disadvantages of producing hydro-electricity by constructing the dams. (2)
- Q8. When a particle of charge $10\mu\text{C}$ is brought from infinity to a point in the electric field, 10 J work is done by the external forces. What is the potential at that point? (2)
- Q9. What are amphoteric oxides? Explain with examples? (2)
- Q10. Name the reducing agent and substance oxidized in the following reactions (2)
(a) $\text{MnO}_2 + \text{Al} = \text{Mn} + \text{Al}_2\text{O}_3$
(b) $\text{PbO} + \text{C} = \text{Pb} + \text{CO}$
- Q11. Light and dark reactions of photosynthesis are interdependent on each other, justify. (2)
- Q12. Name the major parts of hind brain and write the functions of each part. (2)
- Q13. (a) Differentiate resistance and resistivity (two main points). On what factors resistance and resistivity depends. (2)
(b) The figure below shows two cylindrical Cu conductors along with their faces areas and lengths. Discuss in which geometrical shapes, the resistance will be highest (with calculation) (3)



- Q14. (a) What is overloading? State the main causes of overloading. (3)
b) Why should wires carrying electricity not be touched when bare-footed?
- Q15. An electric geyser rated 1500 W , 250 V is connected to 250 V line mains. Calculate- (3)
(i) The electric current drawn by it.
(ii) Energy consumed by it in 50 hours
(iii) Cost of energy consumed if each unit cost $\text{Rs. } 6.00$
- Q16. 2 grams of ferrous sulphate crystals are heated in a dry boiling tube. (3)
(a) Write the chemical equation involved.
(b) List any two observations during the reaction.

- Q17. Show the formation of sodium oxide and write any four properties of the compound with reasons. (3)
- Q18. How are mercury, copper and aluminum metals obtained from their metal oxides? Explain with reactions involved. In what way is reactivity series useful in the process involved? (3)
- Q19. Give the reasons for the following:
- (a) People living in coastal areas do not suffer from iodine deficiency generally.
- (b) Brain is not directly involved in reflex actions. (3)
- Q20. Sugarcane juice is kept in an earthen pot. After a few days the smell of vinegar started coming out. Make out the possible reason and also the details of the process involved. (3)
- Q21. (a) Describe an activity to demonstrate the pattern of magnetic field lines around a straight conductor carrying current.
- (b) State the rule to find the direction of magnetic field associated with current carrying conductor.
- (c) What is the shape of a current carrying conductor whose magnetic field pattern resembles that of bar magnet? (3+1+1=5)
- Q22. (a) Write four difference between electromagnet and permanent magnet. What is the purpose of using soft iron core in making an electromagnet (give two reasons)
- (b) List in tabular form four major difference between electric motor and electric generator.
- (c) Two magnetic field lines never intersect each other. Justify the statement. (2+2+1=5)
- Q23. Dry pellets of a base P when kept in open absorbs moisture and turns sticky, compound is also formed by chlor alkali process.
- (a) Write the name of compounds P and other products. (1)
- (b) Describe chlor alkali process with chemical equation. (2)
- (c) Mention four uses of the products formed in the reaction. (2)
- Q24. (a) How do the lungs provide maximum surface area for gas exchange ?
- (b) Kidneys help in osmoregulation , how ?
- (c) Differentiate between parasitic and saprotrophic modes of nutrition. (3)
- Q25. Draw a neuron. How does the conduction of nerve impulse take place across a synapse ? (5)
- Q26. Draw L.S. of human heart and label the following only –
- (a) The chambers which receive blood.
- (b) The major artery
- (c) The two major veins bringing oxygenated and deoxygenated blood to the heart (2+3=5)

Class-X (Science)
MCQ

- Q1. On what factors resistance of a conductor in a circuit depends. (1)
- Q2. In a voltmeter, there are 20 divisions between the 0 mark and 0.5V mark. The least count of voltmeter is- (1)
(a) 0.020V (b) 0.025V (c) 0.050V (d) 0.250V
- Q3. Which of the following devices would you use to maintain potential difference between two points of a conductor? (1)
(a) A rheostat (b) A cell (c) A voltmeter (d) An ammeter
- Q4. A blue litmus paper was dipped in dil HCl and then in NaOH solution. It was observed that the color of the litmus paper : (1)
(a) Changes to red.
(b) Changed from blue to colourless.
(c) Changed first to red and then to blue.
(d) Remained blue in both.
- Q5. Hydrated Ferrous sulphate is commonly known as: (1)
(a) Blue vitriol (b) Green vitriol (c) Yellow vitriol (d) Brown vitriol
- Q6. Can we store AgNO_3 in copper vessel? Give reasons for your answer. (1)
- Q7. In an air tight experimental set up which was used by you in laboratory to study respiration in germinating seeds, the seeds obtained oxygen from – (1)
(a) The air in the flask
(b) Lime water in the other flask
(c) Moist cotton
(d) Water in germinating seeds
- Q8. The steps involved in making a slide of epidermal peel of leaf are given below- (1)
(i) Pull out a thin peel from the lower surface of the leaf
(ii) Put a drop of glycerin on the slide
(iii) Stain the peel in safranin
(iv) Place the stained peel on the glycerin
(v) Remove extra stain by washing with water
(vi) Place the cover slip over the peel
- Q9. Now arrange the steps in sequence : (2)
You have to prove that sunlight is necessary for photosynthesis. At first you keep a healthy potted plant in a dark room for de starching, why?
