Subject : Science Class : X

Q1. What is the chemical name of baking soda? Give formula also. (1)

Q2. Why POP should be stored in a moisture proof container? (1)

Q3. Name the largest artery in human body. (1)

Q4. Name the metal which is least reactive and silvery white. (1)

Q5. Sweet tooth leads to tooth decay. Explain. What is the role of tooth paste in tooth decay? (2)

Q6. When water is added to a white powder 'A', vigorous reaction takes place and a large amount of heat is released. Compound A is also used in white washing. Identify A, Give its chemical reaction and name the product. (2)

Q7. Why copper turns to green when left in open? Give chemical equation also. (2)

Q8. Why ice cream vendor adds common salt to ice to make ice cream. State the reason by giving chemical equation. (2)

Q9. What is a good source of energy? Give one example of good source of energy. (2)

Q10. State two disadvantages of Hydro Power Plants? (2)

Q11. Why is series arrangement not used for domestic circuits? (2)

Q12. Why are coils of electric toasters and electric irons made of an alloy rather than a pure metal? (2)

Q13. Discuss how brain and spinal cord is protected. (3)

Q14. Predict the nature of following salts by hydrolysing them, and give chemical equations: (3)

a) Sodium chloride.

b) Magnesium sulphate.

c) Potassium carbonate.

Q15. Name the acid found in the following: (3)

a) Curd.

b) Bee's sting.

c) Lemon juice.

Q16. The atomic number of F, Na and Ne are 9, 10 and 11.Why Na and F are very reactive and

Ne shows almost no reactivity? (3)

Q17. Draw a labelled diagram of a biogas plant and labell any three parts. (3)

Q18. The SI unit of a Physical quantity is Ohm. Name the physical quantity. What are the two factors on which it depends? (3)

Q19. i. Give the commercial unit of electrical energy.
(3)

ii. An electric Iron of resistance 20 Ω takes a current of 5 A. Calculate the heat developed in 30 s.

Q20. State three factors on which magnetic field of a current carrying coil depends.
(3)

Q21. Write the functions of the following in the digestive process:

i) HCl ii) Bile ii) Pancreatic amylase
(3)

Q22. Name the two hormones secreted by pancreas. Write the function of each hormone named.
(3)

Q23. Give reasons for the following.
(3)

i) Glottis is covered by epiglottis.

ii) Lung alveoli are covered with blood capillaries.

iii) The walls of trachea is supported by cartilage rings.

.Q24. Give reasons for the following: (5)

i) M.P. and B.P. of ionic compounds are high.
ii) Tarnished copper vessels are cleaned with tamarind juice.
iii) A sulphide ore is converted into its oxide to extract the metal.
iv) Galvanisation is the better method of prevention than painting.
v) Chips packets are flushed with nitrogen gas.

OR

Explain how the following metal is obtained from their compounds by the process of reduction:

a) Name the metal which is in the middle of the reactivity series of metals..
b) Give the name and formula of its ore.
c) Give the chemical reactions involved.and name them.
d) In the electrolytic refining of metal M, name the cathode, anode and electrolyte.

Q25. Draw the diagram of cross section of a leaf and labell the following in it :
(5)

i) Chloroplast ii) Guard cells iii) Lower epidermis iv) Upper epidermis

Name the two stages in photosynthesis

OR

What is reflex action? Give its two examples. Illustrate the pathway followed by a message from the receptor in a reflex arc.

Name any five receptors along with the organ in which they occur.

Q26. i. What is electric Power? Write the expressions for electric power. Define the SI unit of electric power.

ii. An electric motor takes 5A current from a 220 V line. Calculate the power. Also calculate the energy consumed in 2 hours.

(5)

(OR)

i. Derive the relation for the equivalent resistance of a combination of three resistors connected in Parallels.
Draw the necessary diagram

ii. Show how would you connect three resistors each of resistance 6 Ω so that the combination has a total resistance of 18 Ω.

Q27. Draw a diagram of a electric DC Generator to explain its construction and labell the following parts: Armature coil, Magnetic poles, Split rings, Brushes and Battery. Give one difference between the construction of AC Generator and DC Generator .

(5)

(OR)

i) What are the three factors on which force on a current carrying conductor placed in a magnetic field depends?

ii) State Fleming's left hand Rule.

Section :B

Q28. When a few drops of phenolphthalein are added to a dil. solution of HCl it remains colourless. What will be the colour of final mixture when excess of NaOH is added to it :

a) Red.
b) Pink.
c) Green.
d) Blue.

Q29. A student adds dil. solution of hydrochloric acid to universal indicator. He would observe that colour of the solution changes from colourless to :

a) Red.
b) Blue.
c) Green.
d) Yellow.

Q30. Two solutions A and B were found to have pH value of 8 and 3 respectively. The inference which can be drawn is :

a) A is acid and B is base.
b) B is acid and A is base.
c) Both are acidic solutions.
d) Both are basic solutions.

Q31. Which one of the following solutions with same concentration has the lowest valueof pH :

a) Lemon juice.
b) Acetic acid.
c) Sodium hydroxide.
d) Sulphuric acid.

Q32. During the experiment to show that plants do photosynthesis the destarched leaf is boiled in alcohol. Once the boiling is completed.

a) Alcohol remains colourless
b) Leaf remains greenish
c) Alcohol turns greenish and leaf becomes colourless.
d) Novisible change occur

Q33. While preparing a temporary stained mount of a leaf epidermal peel, the extra stain is removed by:

a) Washing with water.
b) washing with calcium chloride.
c) soaking with filter paper.
d) absorbing with cotton wool.

Q34. Before setting up the experiment to show that seeds release CO_2 during respiration, the seeds should be

a) Dried completely.
b) Boiled to make them soft.
c) Soaked in vinegar.
d) Kept moist till they germinate.

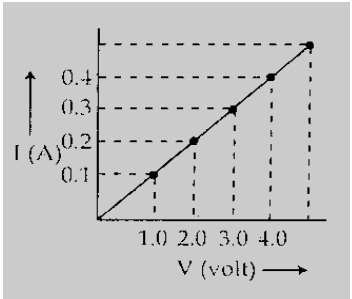
Q35. Stomata plays an important role in

a) Respiration
b) Photosynthesis
c) Transpiration
d) All of the above

Q36. The device used to vary current in a circuit is:

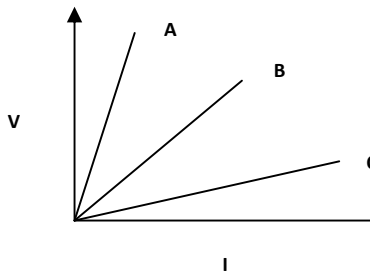
a) Rheostat
b) Thermometer
c) Voltmeter
d) Ammeter

Q37. In the experiment to study the dependence of current on potential difference across a resistor, a student obtained the graph as shown in diagram. The value of resistance of the resistor is:



a) 0.1 Ω
b) 1.0 Ω
c) 10 Ω
d) 100 Ω

Q38. A student performs an experiment and plots the following graph for the two resistors R_1 and R_2 and their Parallel combination. Which graph represents the Parallel combination?

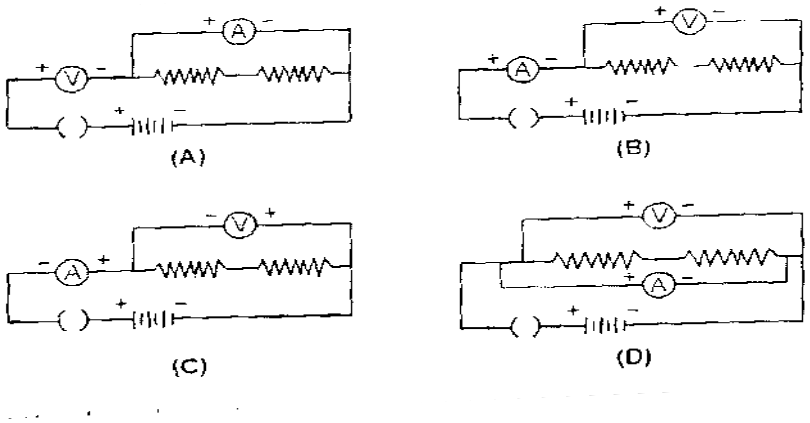


a) A
b) B
c) C
d) None of above

Q39. In an Ammeter, there are 5 divisions between 0 mark and 0.5 V mark. The least count of the voltmeter is
a) 0.5 A
b) 0.1 A
c) 0.2 A
d) 0.3 A

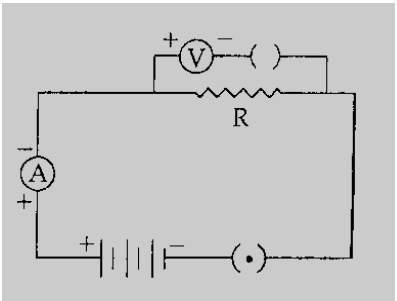
Q40. When two or more resistors are connected in Parallels, the physical quantity that remains same is
a) Resistance
b) Current
c) Potential difference
d) All of these

Q41. To determine the equivalent resistance of two resistors when connected in series, the correct way of connecting the ammeter and voltmeter in the circuit is



Q42. The Voltmeter is always connected in
a) Series with the device across which potential difference is to be measured
b) Parallels with the device across which potential difference is to be measured
c) Either in series or in parallels.
d) None of above

Q43. For the circuit arrangement shown in the given figure, the student would observe
a) No reading in either the ammeter and the voltmeter
b) Some reading in both the ammeter and the voltmeter
c) No reading in the ammeter and some reading in the voltmeter



d) Some reading in the ammeter and no reading in the voltmeter

Q44. The given wire made of material resistivity 'ρ' is stretched to triple its length. The new resistivity of the wire is;

a) ρ
b) 2 ρ
c) 3 ρ
d) 4 ρ

Q45. The SI unit of a physical quantity is Ampere. The physical quantity is

a) Charge
b) Current
c) Potential difference
d) All of these