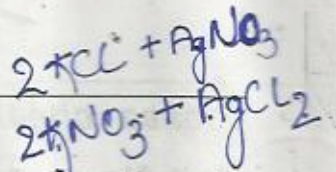
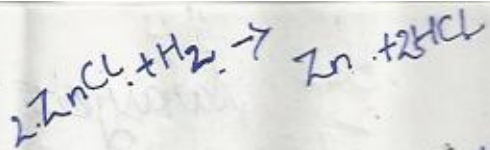
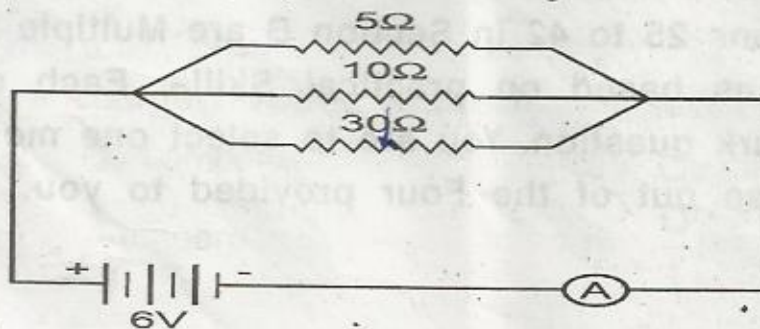


SECTION A



1. Name two tissues that provide Control and Coordination in multicellular animals. 1
2. Which allotrope of Carbon is the hardest natural Substance? 1
3. Which of the following is a renewable Source? Natural gas, petroleum, Ground water and Coal. 1
4. What is bio-gas? How can bio-gas be obtained? 2
5. A Solution of Potassium Chloride when mixed with Silver nitrate Solution, an insoluble white substance is formed. Write the Chemical reaction involved and also mention the type of the Chemical reaction? 2
6. What is the potential difference explain and give the unit with definition. 1 + 1/2 + 1/2 = 2
7. Product formed when A and B react together are Zinc Chloride and hydrogen gas. Find reactant A and B? 2
8. State the Formula Correlating the electric 3
 - (i) Current flowing in a Conductor and the Voltage applied across it. Also show this relationship by drawing a diagram.
 - (ii) What would be the resistance of a conductor if the current flowing through it is 0.35A when the potential difference across it is 1.4V?
9. (a) Describe an activity to draw a magnetic field line outside a bar magnet from one pole to another. 3
 - (b) Write any two properties of magnetic Field Lines.

10.



$$R = \frac{V}{I}$$

- $30 = \frac{6V}{I}$
 $I = \frac{30 \times 6}{180} = 1.80$
- (a) For the Circuit shown above in the diagram, Calculate—
(i) Value of Current through the 30Ω resistance.
(ii) total resistance of the Circuit. 3
- (b) Give two advantages of connecting electrical devices in parallel with a battery. 3

11. Distinguish between renewable and non-renewable sources of energy. Give examples. 3

12. Show the various electrical symbols used in the electric Circuits.

- | | |
|----------------------------|--------------------|
| (i) resistance or resistor | (ii) electric bulb |
| (iii) An open switch | (iv) Cell |
| (v) Connecting wire | (vi) Galvanometer |
- 39
27
21

87
3

13. Explain why -

- (a) Colour of Copper Sulphate crystals changes on heating?
(b) Baking Soda acts as an antacid?
(c) An acid should be added to water while diluting?

14. Salt A commonly used in bakery products on heating gets converted into another Salt B which itself is used For removal of hardness of water and a gas C is evolved. The gas C when passed through Lime Water, turns milky. Identify A, B and C. Write balanced Chemical equations for each step. 3

15. Give reasons - 3

- (i) Platinum, gold and silver are used to make jewellery.
(ii) Sodium is stored in oil.
(iii) Food Cans are coated with tin not with Zinc. Why?

16. (i) What is the common name of the Compound CaOCl_2 ? 3
(ii) What is neutralisation reaction? Give one example. Write equation also.

17. Write the main Function of nervous System? 3

Mg

- 18. ✓ Write any three differences between aerobic and anaerobic respiration. 3
- 19. ✓ What name is given to the glands that secrete hormones in humans? What are the main Function of hormones? 3
- 20. ✓ (a) Why are coils of electric toasters and electric irons made of an alloy rather than a pure metal? 2
- (b) An electric motor takes 5 amp from a 220V line. Determine the power of the motor and the energy consumed in 2 hrs. 3

S.A.T.J

OR

Two Lamps, one rated 60W at 220V and the other 40W at 220V, are connected in parallel to the electric supply at 220V.

- (a) Draw a circuit diagram to show the connection.
- (b) Calculate the current drawn from the electric supply.
- (c) Calculate the total energy consumed by two Lamps together when they operate for one hour. 5
- 21. ✓ State Ohm's Law. Draw a graph between Voltage and current for a metallic Conductor. Draw a Circuit diagram of a Circuit which consists of battery, ammeter, Voltmeter, resistor, rheostat and a key. 5

OR

- (a) State Fleming's Left hand rule
- (b) Name some devices in which electric motors are used.
- 22. ✓ Name different types of Chemical reactions. Give one example of each. 5

OR

Difference between metals and non-metals (any five point)

- 23. ✓ (a) Show the Formation of MgO by the transfer of electrons.

[P.T.O.]

- (b) Name the Cation and anion
(c) Write the properties of ionic Compounds. 5

OR

Give reason for the following

- (a) Gold and Platinum are used in Jewellery.
(b) Copper cannot displace hydrogen from dil. acids
(c) Stainless Steel does not rust easily.
(d) Metals can be given different shapes according to our needs.
(e) Zinc does not give hydrogen gas on reacting with HNO_3

24. (a) Draw the diagram of alimentary Canal of man and label the following parts -Mouth, Oesophagus, Stomach, intestine. 5

(b) Where do Carbohydrates, proteins and Fats get digested in human beings?

OR

What is the advantage of having Four-Chambered heart? Draw neat and clean labelled diagram of human heart.

25. SECTION B

For rusting of iron, the essential requirement is -

- (a) air (b) water
(c) Open Surface Metal (d) All of the above

26. pH of pure water is 1

- (a) 3 (b) 7
(c) 10 (d) 9

27. The acidic nature of hydrochloric acid is due to the presence of which one of the following ions in solution 1

- (a) Hydrogen ions (b) Chloride ions

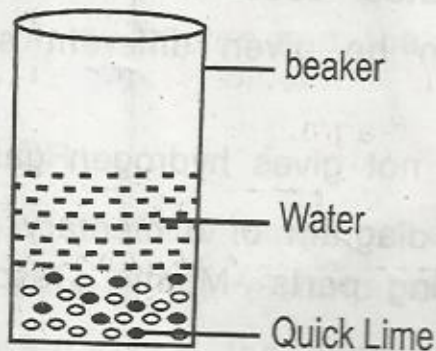
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(c) Hydroxide ions

(d) Sulphide ions

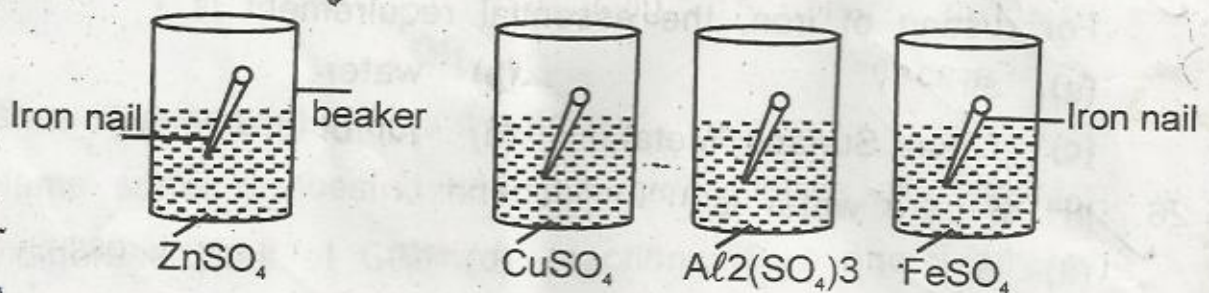
28. Which one of the following is observed when water and quick Lime are mixed :

- (a) A vigorous reaction takes place
 (b) Outer surface of beaker becomes hot
 (c) Water vapour comes out of the beaker
 (d) All of the above

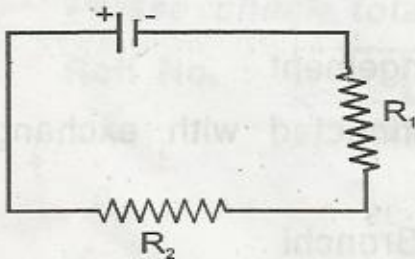


29. Solution of Zinc Sulphate(I), Copper Sulphate(II), Aluminium Sulphate(III), Iron Sulphate(IV) were taken in four beaker. An Iron nail was put in each solution and the system was left undisturbed for about an hour. In which Setup or set the iron nail would be coated.

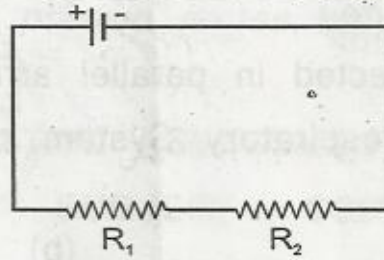
- (a) I and II
 (b) II and III
 (c) only in II
 (d) only in IV



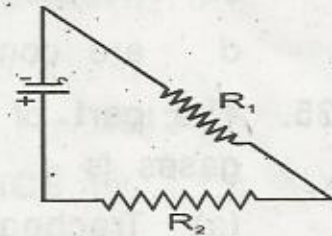
30. Two resistances R_1 and R_2 are connected in series Combination. Which of the following Figure shows the correct combination?



(A)



(B)



(C)

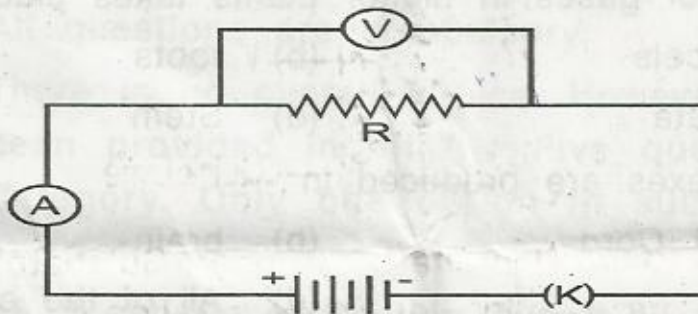
(a) only A

(b) only B

(c) only C

(d) All the Figures

31. Which two Circuit Components are connected in parallel in the following Circuit diagram?



(a) Key and Voltmeter

(b) Voltmeter and resistor

(c) Voltmeter and ammeter

(d) Ammeter and resistor

32. $V \propto l$. This relation was given by -

(a) Faraday

(b) Watt

(c) Ohm

(d) Coulomb

33. Resistance of a Conductor depends on -

(a) its length

(b) Area of Cross-Section

(c) Material of the Conductor

(d) All the above

34. Electric appliances having metallic body, are connected with for safety purpose -

a. a Fuse wire

b. an earthing

- c. neutral wire
d. are connected in parallel arrangement
35. The part of respiratory System connected with exchange of gases is -
(a) Trachea (b) Bronchi
(c) Alveoli (d) Pharynx
36. Salivary amylase acts upon -
(a) Fats (b) proteins
(c) Starch (d) Glucose
37. Exchange of gases in higher plants takes place through -
(a) Centicels (b) roots
(c) Stomata (d) Stem
38. Spinal reflexes are produced in -
(a) Spinal Cord (b) brain
(c) Heart (d) All of the above
39. The hormone that is used to keep flowers fresh is -
(a) Auxin (b) gibberline
(c) cytokinin (d) ethylene
40. Which one of the following types of medicines is used for treating indigestion?
(a) Antibiotic (b) Analgesic
(c) Antacid (d) Antiseptic
41. Which of the following elements is a non metal?
(i) $\begin{matrix} 7 \\ X \\ 3 \end{matrix}$ (ii) $\begin{matrix} 24 \\ Y \\ 12 \end{matrix}$ (iii) $\begin{matrix} 35 \\ Z \\ 17 \end{matrix}$
42. If a charge flows in a circuit in t second, the current will be
(a) Qxt ampere (b) Qxt^2 ampere
(c) $\frac{t}{Q}$ ampere (d) $\frac{Q}{t}$ ampere