SUMMATIVE ASSESSMENT – I, 2016-17 QPSFC16

SCIENCE Class – X

SECTION A

1. Why it is advised to use iodised salt in diet?

2 .What is meant by magnetic field?

3. Name the kind of energy possessed by wind and the device used to harness it.

4. Name the gas which is liberated when an acid reacts with a metal. Illustrate with an example. . How will you test the presence of this gas?

5. Write the chemical formula of Bleaching powder. How bleaching powder is prepared For what purpose is it used in thinking water

6. (i) Name two waste products which are stored in old xylem in plants. (ii) Name the process by which plants get rid of excess water. Name the pores through which this process takes place.

7. Balance the following chemical equations and state whether they are exothermic or endothermic:

(i) $Na + H_2O$ --------> $NaOH + H_2$ (U) $FeSO_4$ ----> $Fe_20_3 + SO_2 + SO_3$

8. State reason for the following:

(i) Dry HCI gas does not change the colour of the dry blue litmus paper.

(ii) Alcohol and glucose also contain hydrogen, but do not conduct electricity

(iii) Concentration of H_3O^+ ions is affected when a solution of an acid is diluted.

9. Write chemical equations for the reactions taking place when

(i) Magnesium reacts with dilute HNO_3 (ii) Sodium reacts with water. (iii) Zinc reacts with dilute hydrochloric acid.

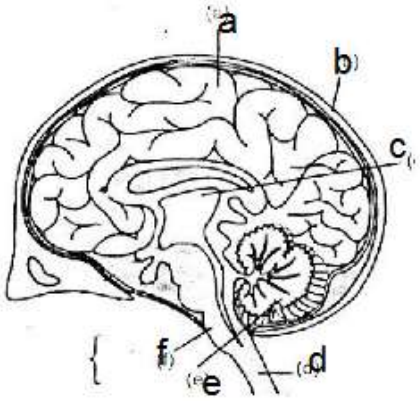
10. Write the balanced equations for the following reactions and identify the type of reaction in each case

(a) Silver Nitrate (aq) + Potassium Iodide(aq) -- -> Silver iodide (s) + Potassium Nitrate (aq)

(b) Potassmm Chlorate(s) -> Potassium chlorites (s) + Oxygen (g)

11. Draw a neat diagram of cross-section of a leaf. Label any four parts on it.

12. Identify the unlabelled parts of brain in the given fig .

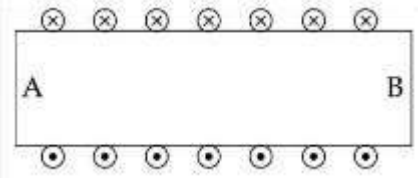


13. State the role of the following in the process of respiration hl humans:

(i) nasal cavity (ii) diaphragm (iii) alveoli

14. An electrical bulb is rated 40 W, 220 V. How many bulbs can be connected in parallel with each other across the two wires of 220 V line if the maximum allowable current is 6 A ?

15. Diagram shows the length wise section of a current carrying solenoid.



⊗ Indicates current entering into the page, © indicates current emerging out of the page.

Decide which end of the solenoid A or B, will behave as North Pole. Give reason for your answer. Also draw field lines inside the solenoid.

16 A dry provides a potential difference of 1.4 V across the ends of a 10 Ohm resistor. Calculate (i) The current flowing through the resistor. (ii) The charge that flows through the resistor .

17. Rahul, a student of clans X lives in Delhi. He had an idea in his mind of setting up a thermal power plant in the nearby village. His friend Rohan suggested him to set a solar cell panel to harness solar energy, instead of thermal

power plant, Answer the following questions: (i) Do you think that Rohm, suggestion was appropriate? Justify your answer. (ii) Mention the quality of Rohan portrayed in his act.

18. Compare the advantages of generating energy from biomass than getting It from hydropower plant ?

19. (a) write electron dot structure of chlorine (at no. 17) and calcium (at no. 20). Show the formation of calcium chloride by the transfer of electrons. (b) Identify the nature of the above compound and explain three physical properties of such compounds.

20. State what happens when a concentrated solution of sodium chloride electrolyzed. Name the process. Write the equation of the reaction involved. write the names a products obtained. Mention one use of each product.

21. With the help of a labelled diagram explain the general scheme to illustrate how nervous impuse, travel in the body.

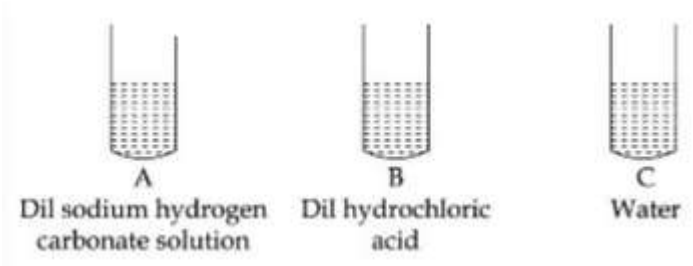
22 Explain why electric power transmitted at high voltages and low currents to distant places.

23 (a) what is meant by electromagnetic induction? Name one device which works on the electromagnetic induction. (b) Describe three different ways to produce induced current in a coil of wire.

24 .Differentiate between AC and DC. Name one source of each. Write any two advantages of 5 alternating current over direct current.

SECTION - B

25. Which of the following is correct about the colour obtained on pH paper and their pH values in the solution taken in test tubes A, B and C respectively?



	A	B	C
(a)	Blue,10	Red, 2	Green, 7
(b)	Red, 2	Blue, 10	Green, 7
(c)	Green, 7	Red, 2	Blue, 10
(d)	Blue, 2	Red,10	Green, 7

26 A student was given a solution which urns blue litmus to red. The expected pH of solution

(a) 7 (b) 6 (c)9 (d) 13

27. Four students P, Q, R and S studied the chemical reactions between Zinc metal and dil. hydrochloric acid. They recorded their observation as given in the table:

Student	Observation		
	Colour of the liberated	Smell of the gas liberated	Combustibility test of gases
P	Brown	like rotten egg	Bums with pop sound
Q	colourless	Odourless	Bums with pop sound
R	Pale yellow	Odourless	Does not burn
s	Pungent smell	Colourless	Bums with red flame

The right set of observation is of student (a) P (b) Q (c) R (d) S

28. A chemistry lab-in charge kept Zn metal in $FeSO_4$, solution and observed that after some time green $FeSO_4$ solution turn, to colourless and some brown powder was deposited on zinc. In the above section, Zn metal acted as

(a) Oxidising agent (b) Reducing agent (c) Dehydrating agent (d) Catalyst

29 .Aradhika add, zinc granules in iron sulphate solution. She made a few observations. Identify the incorrect observations

(i) Pale green solution becomes colourless (ii) Black deposit soon on zinc granules.

(iii) Red deposit seen on zinc granules. (iv) Colourless solution become pale green.

(a) (i) and (ii) (b) (ii) and (iv) (c) (ii) and (iii) (d) (i) and (v)

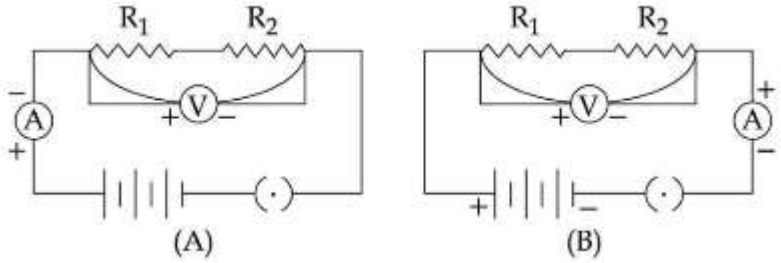
30. To find the equivalent resistance of two resistors connect in series, the connection of ammeter is correct in the circuit :

(a) Circuit

(b) Circuit

(c) Both the circuits

(d) Neither of the two circuit



31 The resultant resistant of two resistors is 2 Ω . The resistance of each resistor is (a) 2 Ω (b) 4 Ω (c) 1 Ω) (d) 0.5

32. The best results for the experiment hat light is necessary for photosynthesis would be yielded by using leave, from plant kept for over twenty four hours:

(a) In a pitch darkroom (b) In a darkroom with the table lamp switched on

(c) Outside in the garden (d) Outside in the garden, covered by a

33. In the experiment to show that CO2 is released during respiration, dry gram seeds are not used because:

(a) they release O_2 during respiration (b)they do not photosynthesis

(c) they do not respire √ (d)they respire but release both CO_2 and O_2

34. A student added water to quick lime kept in a beaker. State the conclusions he would draw, about the chemical reaction that takes place, on the basis of his observation.

35. The rest positions of the pointers of a milliammeter and voltmeter not in use are as shown in fig A. When a student uses these in his experiment the reading of pointers are in positions shown in fig B. Calculate the corrected value of current and voltage in this experiment.

36. In an experiment to prepare temporary stained mount of a leaf epidermal peel, how can extra stain he removed? What possible outcome would be observed if it is removed with cotton wool?

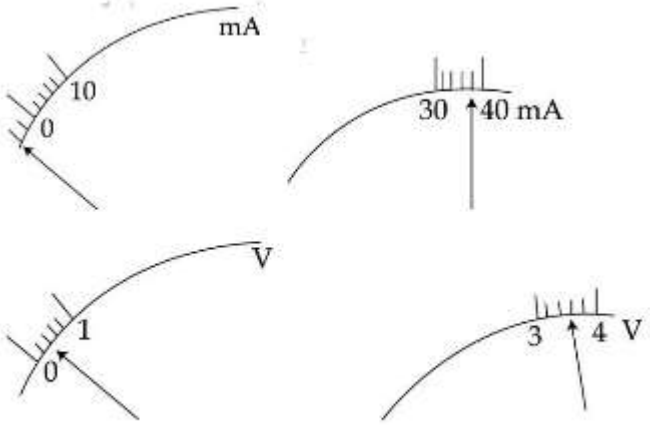


Fig A Fig B