PRACTICE PAPER FOR SUMMATIVE ASSESSMENT – I, 2015

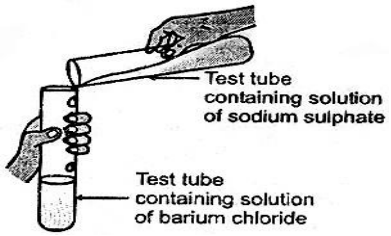
Class – X SCIENCE Time Allowed : 3 hours Maximum Marks : 90

General Instructions :

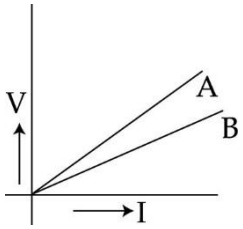
1. The question paper comprises of **two Sections, A** and **B**. You are to attempt both the sections.
2. **All** questions are **compulsory**
3. **All** questions of **Section-A** and **all** questions of **Section-B** are to be attempted separately.
4. Question numbers **1** to **3** in **Section-A** are **one mark** questions. These are to be answered in **one word** or in **one sentence**
5. Question numbers **4** to 6 in **Sections-A** are **two marks** questions. These are to be answered in about **30 words** each.
6. Question numbers **7** to **18** in **Section-A** are **three marks** questions. These are to be answered in about **50 words** each
7. Question numbers **19** to **24** in **Section-A** are **five marks** questions. These are to be answered in about **70 words** each.
8. Question numbers **25** to **33** in **Section-B** are multiple choice questions based on practical skills. Each question is a **one mark** question. You are to select one most appropriate response out of the four provided to you.
9. Question numbers **34** to **36** in **Section-B** are questions based on practical skills are two **marks** questions.

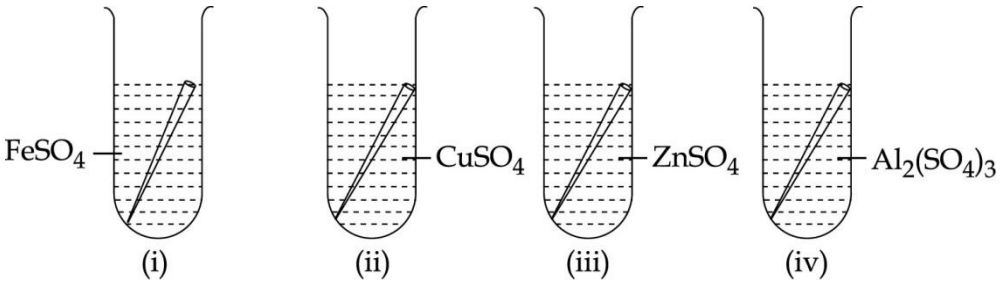
SECTION-A

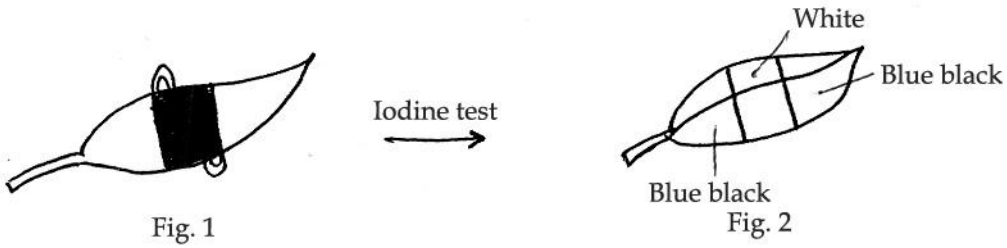
1	Mention the raw materials required for photosynthesis.	1
2	Name the device that helps to maintain a potential difference across a conductor.	1
3	Why is a solar cooker painted black from outside ?	1
4	Write the name and formula of one salt each which contains : (i) two molecules of water of crystallisation. (ii) ten molecules of water of crystallisation.	2
5	A compound 'Z' is formed by the transfer of electrons from a metal 'X' to a non-metal 'Y'. Identify the type of bond formed in the compound. List three general properties of the compounds formed by such type of bonds.	2
6	(i)Name the hormones that are released in human males and females when they reach puberty. (ii)Name a gland associated with brain. Which problem is caused due to the deficiency of the hormone released by this gland ?	2
7	Observe the given figure and answer the following questions :	3

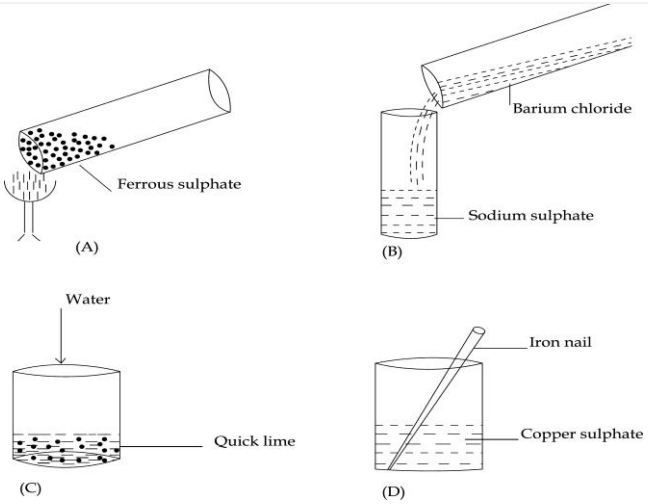


		(i) Write a balanced equation for the above reaction. (ii) Name the type of reaction and the colour of the precipitate formed. (iii) Write any other example of the same type of reaction.	
8		(a) Given below are the pH values of four different liquids : 7.0, 14.0, 4.0, 2.0. Which of these could be that of : (i) lemon juice (ii) distilled water (iii) sodium hydroxide solution (iv) tomato juice (b) When blue litmus solution is added to soda water, what change will be observed and why ?	3
9		Write one point of difference between each of the following : (i) A hydrated salt and an anhydrous salt (ii) Washing soda and soda ash (iii) Baking soda and Baking powder	3
10		Explain why the surface of some metals acquire a dull appearance when exposed to air for a long time. Support it with three examples.	3
11		Draw a diagram of human respiratory system and label on it : (i) Diaphragm (ii) Larynx	3
12		Write one example each of the following tropic movements : (i) Positive phototropism (ii) Negative phototropism (iii) Positive geotropism (iv) Negative geotropism (v) Hydrotropism (vi) Chemotropism	3
13		(a) Name the site of exchange of material between the blood and surrounding cells. (b) Draw a schematic representation of transport and exchange of oxygen and carbon dioxide in human body.	3
14		In Faraday's experiment if instead of moving the magnet towards the coil we move the coil towards the magnet, will there be any induced current ? Justify your answer. Compare the two cases.	3
15		Define 1 volt. Express it in terms of SI unit of work and charge. Calculate the amount of	3

	energy consumed in carrying a charge of 1 coulomb through a battery of 3 volts.	
16	V – I graphs for two wires A and B are shown in the figure. If both the wires are of same length and same thickness, which of the two is made of a material of high resistivity ? Give justification for your answer.  	3
17	Traffic jams, outside the school gate was a common sight since most of the students came on their own cars. This became a topic for discussion on every P.T.A meeting. On one such P.T.A meeting, the principal pointed out the examples of four of their teachers who were car pooling for the past several years. She asked the parents also to adopt this method to sort out the problem. (a) List two values shown by the teachers mentioned by the Principal. (b) Explain two advantages that will occur if more parents emulated the example of these teachers.	3
18	Differentiate between energy obtained by burning fossil fuels and that obtained as solar energy.	3
19	(a) Explain the following terms : (i) Mineral (ii) Ore (iii) Gangue (b) Name the reducing agent in the following reaction : $3MnO_2 + 4Al \rightarrow 3Mn + 2Al_2O_3$ Which is more reactiveMn or Al and why ?	5
20	Identify the type of chemical reaction in the following statements and define each of them : (i) Digestion of food in our body (ii) Rusting of iron (iii) Heating of manganese dioxide with aluminium powder (iv) Blue colour of copper sulphate solution disappears when iron filings are added to it (v) Dilute hydrochloric acid is added to sodium hydroxide solution to form sodium chloride and water	5
21	State the structural and the functional unit of the nervous system. Draw its neat labelled diagram and write two functions.	5
22	(a) State the meaning of 'frequency' of an alternating current. Mention its value in India. Why is an alternating current considered to be advantageous over direct current for long range transmission of electric energy ? Explain.	5

	(b) Why and when does a current carrying conductor kept in a magnetic field experience a force ? List the factors on which the direction of this force depend. State the rule which may be used to determine the direction of this force.	
23	What are magnetic field lines ? List three characteristics of these lines. Describe in brief an activity to study the magnetic field lines due to a current flowing in a circular coil.	5
24	What does an electric circuit mean ? Name a device that helps to maintain a potential difference across a conductor in a circuit. When do we say that the potential difference across a conductor is 1 volt ? Calculate the amount of work done in shifting a charge of 2 coulombs from a point A to B having potentials□ 10 V and □ 5 V respectively.	5
	SECTION - B	
25	Out of HCl and CH_3 COOH (ethanoic acid) of same concentration, the solution with lower pH value is : (a) HCl solution (b) CH3 COOH or ethanoic acid (c) It depends upon the quantity take for testing (d) Can't be predicted.	1
26	A student test a sample of drinking water and found its pH as 6. Which one of the following have been possibly present in water ? (a) sodium hydroxide (b) sodium chloride (c) sodium bicarbonate (d) sodium carbonate	1
27	The colour of the gases produced on thermal decomposition of ferrous sulphate is : (a) Greenish yellow (b) Yellow (c) Reddish yellow (d) Colourless	1
28	Shilpee wanted to test the reactivity of iron, she put iron nails in four different solutions as shown below. She would observe that reaction takes place only in –  (a) (i) and (ii) (b) only (ii) (c) (ii) and (iii) (d) (iii) and (iv)	1
29	An iron nail was kept immersed in aluminium sulphate solution. Correct observation made after half an hour, would be – (a) the colourless solution changed to green. (b) a grey coating was deposited on iron nail. (c) the iron nail became red, the colourless solution remained colourless. (d) the solution remained colourless and no deposition observed.	1

30	A teacher demonstrated the experiment "To find the equivalent resistance of two resistors when connected in series". Rahul and Raghav after observing the experiment concluded that :- Rahul: The current passing through the resistors in series combination is same. Raghav: The potential difference across the combination of resistors is the sum of potential differences across each of them, then : (a) Rahul is right ,Raghav is wrong (b) Raghav is right,Rahul is wrong (c) Both Rahul & Raghav are wrong (d) Both Rahul & Raghav are right	1
31	The electrical appliances in the houses are connected with each other in (a) Parallel (b) Series (c) Devices high power like refrigerator in series and devices of low power like bulb and fan in parallel (d) Devices of high power like iron and refrigerator in parallel and devices of low power like bulb and fan in series.	1
32	To get result as shown in Fig.2, the leaf should be covered on :  Fig. 1 Fig. 2 (a) Upper side (b) Lower side (c) Both sides (d) Partially covered on both sides	1
33	The purpose of keeping some KOH in the test tube with the germinating seeds in the conical flask in the set up to demonstrate that CO_2 is released during respiration is : (a) to absorb water from the seeds to make them dry (b) to make the air in the flask warm (c) to absorb CO_2 and create partial vacuum in the flask. (d) to provide O_2 to the germinating seeds	1
34	Observe the following reactions :	2



Mention the type of reaction taking place in each of the above four cases A, B, C and D.

35	While experimentally verifying Ohm's law a student observed that the pointer of the voltmeter coincide with 15th division when the voltmeter has a least count of 0.05 V. Find the observed reading of voltmeter.	2
36	Identify the observed various parts of temporary mount of well stained leaf peel, when focussed under the high power of a microscope.	2