WZ3709Z

SCIENCE - PRACTICE PAPER
Class – X

Time Allowed : 3 hours **Maximum Marks : 90**

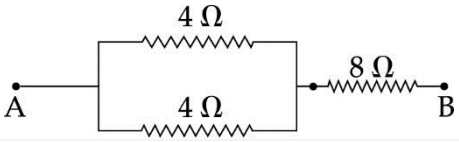
General Instructions :

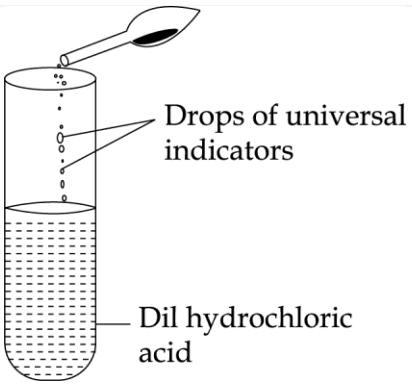
1. The question paper comprises of **two Sections, A** and **B**. You are to attempt both the sections.
2. **All** questions are **compulsory**
3. **All** questions of **Section-A** and**all** questions of **Section-B** are to be attempted separately.
4. Question numbers **1** to **3** in **Section-A** 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. Each question is of two **marks**.

SECTION-A

1	Name the hormone in humans which regulates carbohydrate, protein and fat metabolism in the body. Mention the site where it is synthesized.	1
2	For same current flowing through a solenoid and a straight conductor, the magnetic field produced by a solenoid is much stronger than the magnetic field produced by a straight current carrying conductor. State one reason to justify this statement.	1
3	Why is a solar cooker painted black from outside ?	1
4	Explain why respiration is considered as an exothermic reaction. Write chemical equation for the reaction that takes place during the process of respiration.	2
5	A milk man adds very small amount of baking soda in fresh milk. (a) Why does he shift the pH of fresh milk from 6 to slightly alkaline? (b) Why does this milk take a long time to set as curd?	2
6	Write one function performed by each of the following : (a) Platelets (b) Haemoglobin (c) Diaphragm (d) Capillaries	2
7	Define the term decomposition reaction. Give one example each of thermal decomposition and electrolytic decomposition.	3

	8	What is chlor-alkali process ? Write the chemical reaction taking place in the form of a balanced chemical equation. Name the gases liberated at the cathode and at the anode respectively.	3
	9	Differentiate between the following with suitable examples : (i) mineral and ore (ii) corrosion and rancidity (iii) malleability and ductility	3
	10	Why some metal surfaces acquire a dull appearance when they are exposed to moist air ? Write colour acquired by the surfaces of copper and silver in such situation and also write the chemical names of the substances due to which it happens.	3
	11	Define breathing. Explain the mechanism of breathing in human beings.	3
	12	Define hormone. Name the hormone secreted by thyroid gland. Write its function. Why is it advised to use iodised salt ?	3
	13	State the effect of the following in digestion of food in alimentary canal : (i) If hydrochloric acid is not secreted. (ii) If the bile duct is completely blocked. (iii) If there is blockage in the pancreatic duct.	3
	14	A current of 5 amperes is passed through a conductor of 12 ohms for 2 minutes. Calculate the amount of heat produced.	3
	15	Give reasons for the following : (a) It is dangerous to touch the live wire of the main supply rather than neutral wire. (b) In household circuit parallel combination of resistances is used. (c) Using fuse in a household electric circuit is important.	3
	16	How will the resistance of a wire change when : (i) its length is doubled. (ii) its diameter is doubled. (iii) its temperature is increased.	3
	17	Ria visited her aunt's house and observed that all the tube lights and fans in her house were switched on without any need. She switched off all the lights and fans which were not in use but was scolded by her aunt for doing so. She then explained her aunt about the need to save electricity. Later, Ria's aunt promised her that she will now save electricity. Now answer the following questions : (i) Why did Ria insist on saving electricity ? (ii) State two ways by which electricity can be saved. (iii) Which values of Ria are reflected in her actions?	3
	18	Write two points of difference between renewable and non-renewable sources of energy. Give one example of each.	3
	19	(a) A dry pallet of common base 'X', when kept in open air absorbs moisture and turns sticky. The compound is also a by-product of chlor-alkali process. Identify 'X'. What type of reaction occurs when 'X' is treated with strong acid ? Write a balanced chemical equation for	5

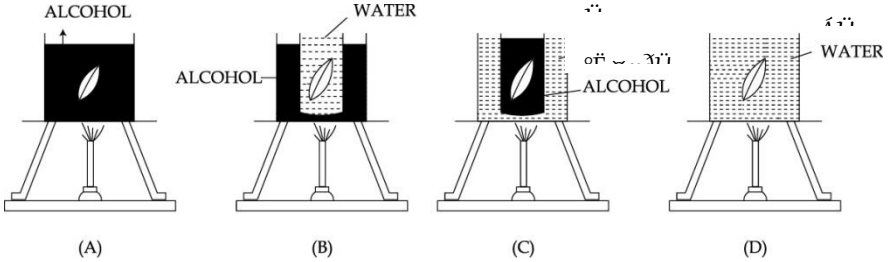
		such reaction. (b)Can we store the base 'X' in an aluminium container ? Give reason in support of your answer.	
	20	(a) An ore, on heating in air, gives sulphur dioxide gas. Name the method in each metallurgical step, that will be required to extract this metal from its ore. (b) State which of the following reactions will take place or not, giving suitable reason for each. $Zn_{(s)}1CuSO_{4(aq)} \rightarrow ZnSO_{4(aq)}1Cu_{(s)}$ $Fe_{(s)}1ZnSO_{4(aq)} \rightarrow FeSO_{4(aq)}\ 1Zn_{(s)}$	5
	21	(a) Name one organ where growth hormone is synthesised in: (i) man (ii) plant. (b) List the sequence of events that occur when a plant is exposed to unidirectional light, leading to bending of a growing shoot. Also name the hormone and the type of movement.	5
	22	(a) Define Ohm's law. (b) Draw graph between V and I (c) A piece of wire having resistance R is cut into four equal parts (i) Compare the resistance of each part with the resistance of the original wire. (ii) If the four parts are connected in parallel, compare the equivalent resistance with the resistance of the original wire.	5
	23	(a) Describe an activity to show how a moving magnet may be used to generate electric current in a coil. State the rule to find the direction of electric current generated in the coil. (b) A coil 'A' of insulated copper wire is connected to a galvanometer. What would you observe when - (i) A current carrying coil 'B' is brought near 'A' ? (ii) Strength of current in coil B is changed ?	5
	24	Establish a relation for the equivalent resistance of three resistors connected in parallel. Calculate the resistance between A and B in the network shown below. 	5
		SECTION - B	
	25	Shreya added a few drops of universal indicator to a solutions as shown in the figure given below.	1

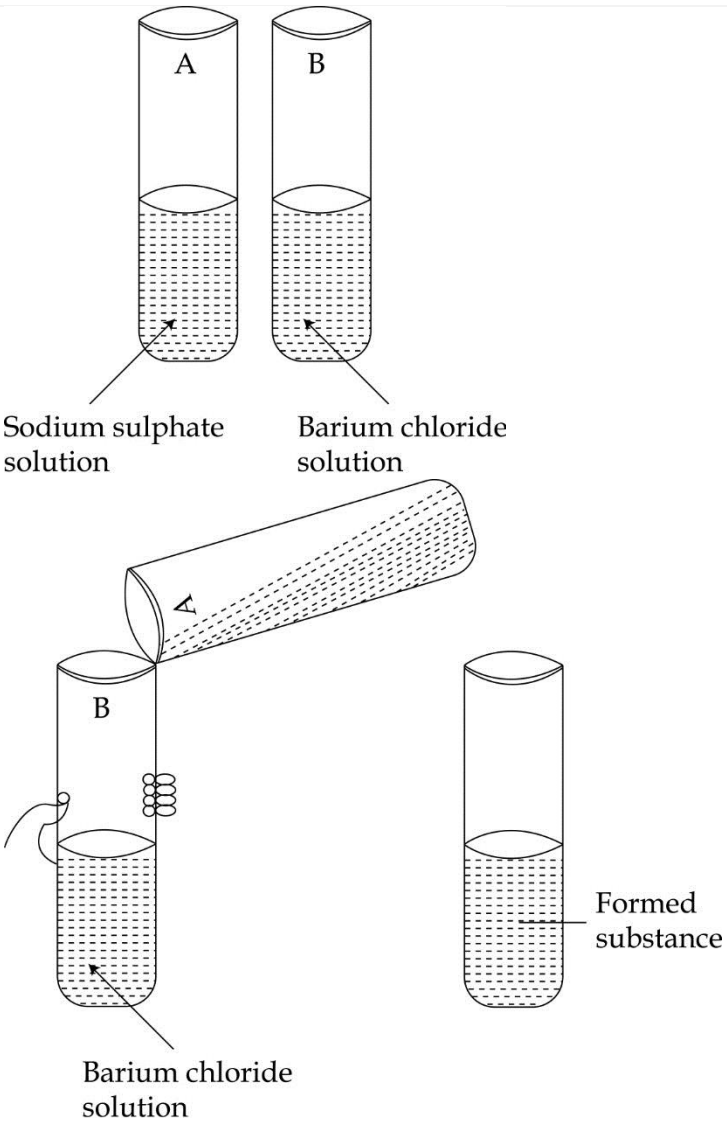


She would observe that colour of the solution has changed from colourless to :

(a) yellow (b) red (c) green (d) blue

26	The correct order for increasing values of pH for water, lemon juice and NaOH solution will be : (a) Water < lemon juice <NaOH solution. (b) lemon juice <NaOH solution< water (c) lemon juice < water <NaOH solution. (d) NaOH solution < water < lemon juice.	1
27	The following are the steps of procedure to study the reaction of zinc metal with hydrochloric acid (dil) : Step (1) Put about 5 mL dil HCl into the test tube Step (2) Take zinc granule in a clean dry test tube Step (3) Effervescence will come out from the reaction mixture Step (4) Perform the combustion test of the gas liberated The correct sequence of steps is : (a) 1, 2, 3,4 (b) 2, 1, 4, 3 (c) 2, 1, 3, 4 (d) 2, 3, 4, 1	1
28	Sapna added a small strip of aluminium to ferrous sulphate crystals. Her observation should be : (a) No reaction takes place (b) Formation of crystals of aluminium sulphate. (c) Ferrous sulphate crystals turn colourless (d) Aluminium turns light green.	1
29	Betty added Aluminium metal to colourless solution of Zinc sulphate. After half an hour the solution was observed. It was colourless. She recorded her observations in the following statements. (i) No reaction occurred (ii) Reaction occurred and aluminium sulphate was formed (iii) Zinc is more reactive than aluminium. (iv) Aluminium is more reactive than zinc.	1

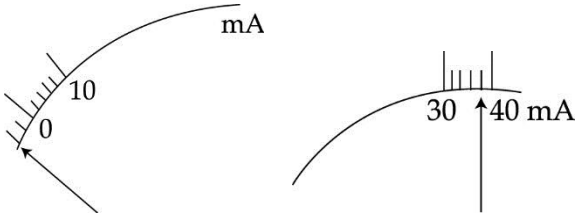
	The correct observations are : (a) (i), (ii) (b) (ii), (iii) (c) (iii), (iv) (d) (ii), (iv)	
30	In a circuit four resistors of 1ς, 2 ς, 6 ς, 12ς respectively are connected in series combination. The maximum resistance that can be obtained is : (a) 21ς (b) 18ς (c) 6ς (d) 4ς	1
31	Two wires of resistances R_1 and R_2 are joined in parallel. The equivalent resistances of the combination is— (a) R_1R_2/R_1+R_2 (b) R_1+R_2 (c) R_1xR_2 (d) R_1/R_2	1
32	Which of the following methods should be [illegible] while de-starching the leaf?  (a) A (b) B (c) C (d) D	1
33	In an experiment to show that 'CO_2 is released during respiration,' the water level in the bent tube is seen to rise : (a) immediately on setting up the apparatus (b) after about 2 hours (c) after 24 hours (d) after 5 days	1
34	Take 4 mL solution of sodium sulphate in Test tube A and 4 mL solution of barium chloride in test tube B. Now pour the solution of test-tube A in the solution of test tube B, as shown in the figure :	2



(i) What would you observe when they are mixed together ?

(ii) Name the substances formed after exchanging the ions of the two solutions A and B.

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. 2



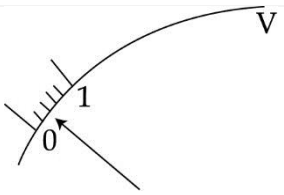


Fig A

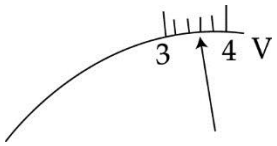


Fig B

	36	Rearrange the steps in the preparation of a temporary mount of a stained leaf peel. (i) Cover the material with the cover slip. (ii) Transfer the stained peel to the clean glass slide and add a drop of glycerin. (iii) Remove the peel from the lower surface of the leaf. (iv) Drop it in the water in a Petridish and add a drop of Safranin stain.	2
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