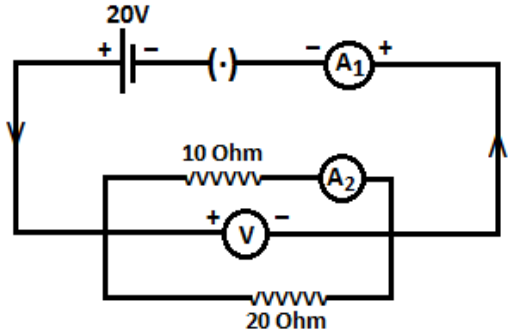
APEEJAY SCHOOL, PITAMPURA
SUMMATIVE ASSESSMENT-I (2016-2017)
SUBJECT-SCIENCE
CLASS-X

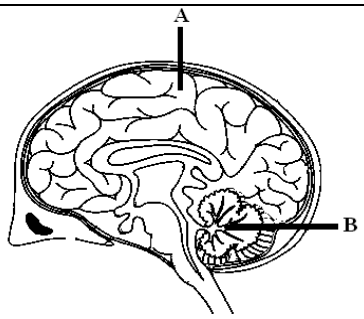
TIME-3Hrs. **M.M-90**

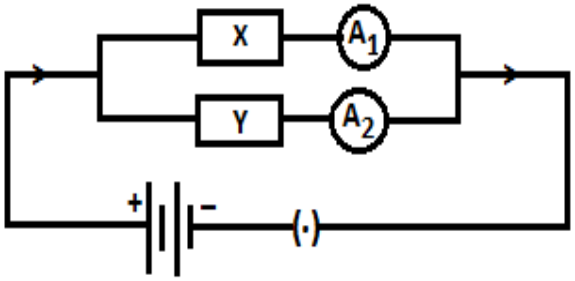
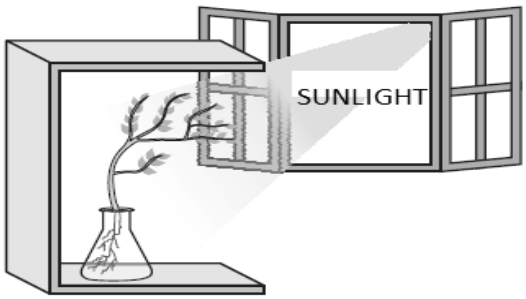
Note:- Do as directed

SECTION-A

1.	What happens to the resistivity of a conductor if it is made thinner?	1
2.	Give one difference between a bar magnet and an electromagnet?	1
3.	State any two disadvantages of fossil fuels?	1
4.	What is the brown colored gas evolved when lead nitrate crystals are heated in a dry test tube? Write the balanced chemical equation of the above reaction.	2
5.	a) What are ionic compounds? b) Show the formation of quick lime with help of electron dot structure.	2
6.	Two electric lamps of 100W and 25W are connected in parallel to a supply voltage of 200V. Calculate total current flowing through the circuit?	2
7.	When electricity is passed through brine, caustic soda is produced along with the liberation of two gases 'X' and 'Y'. 'X' is highly inflammable gas and 'Y' is used for disinfecting drinking water. Identify 'X' and 'Y'. a) Give the balanced chemical equation for the reaction stated above. b) State the reaction of 'Y' with dry slaked lime.	(1+1+1=3)
8.	A metal oxide 'X' is black in color. When 'X' is heated with H_2 gas, metal 'Y' is formed which is reddish brown in color. Identify X and Y. Write the chemical equation involved in the above reaction and also mention which substance is oxidized and is getting reduced.	(3)
9.	Solid Calcium oxide is taken in a container and water is added slowly to it: a) State any two observations made in this experiment. b) Write the chemical name and chemical formula of the product formed. c) Give chemical equation of the product formed with carbon dioxide.	(1+1+1=3)

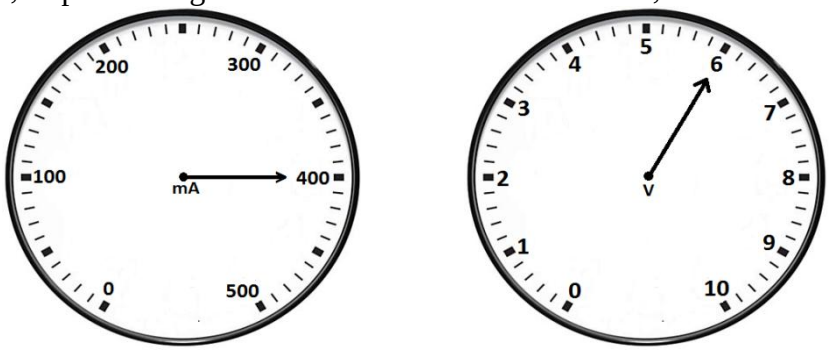
10.	(a) Why do ventricles have thicker muscular walls than Atria? (b) What are peristaltic movements? (c) Stomata remain closed during the day time in desert plants. How do they perform Photosynthesis?	(1+1+1=3)
11.	Describe the steps involved in extraction of pure zinc from its sulphide ore.Support your answer with balanced chemical equation for the chemical reactions involved.	3
12.	Find the readings of the following :-  **a.** Ammeter A_1 **b.** Ammeter A_2 **c.** Voltmeter V	3
13.	(a) State the rule for the direction of the magnetic field produced around a current-carrying conductor. (b) Draw a sketch of the pattern of the field lines due to a current flowing through a straight conductor.	3
14.	How does a solenoid behave like a magnet? Can you determine the north and south poles of a current-carrying solenoid with the help of a bar magnet? Explain.	3
15.	Feeling nervous can be a normal reaction to stressful unknown circumstances. This nervousness leads to body changes due to increased production of a stress hormone. (a) Name this stress hormone and the gland by which it is secreted. (b) Mention any two changes which one is likely to experience when this hormone is released.	(1+2=3)
16	Observe the diagram given below and answer the following questions:	3

	 a) Identify the parts labeled as A and B. b) Give the function of A and B.	
17.	Mr. Ram got frustrated by frequent power cuts so he purchased a new generator. He kept it 500m away from mains and connected it to the mains with a high resistive conductive material wire. After few hours a power cut happened again. He switched on the generator but required voltage could not be obtained from the mains. In the mean time one of his friends, Mr. Shyam visited his house. On seeing this, he advised Mr. Ram to use a low resistive conductive material wire instead of a high resistive conductive material wire. After changing the wire as per the advice, the required necessary voltage was obtained. **a)** Why the required voltage could not be obtained with high resistive conductive material wire ? **b)** Name some low resistive conducting materials which Mr. Shyam would have suggested. **c)** What qualities do you find in Mr. Shyam ?	3
18.	Why is biogas considered as an ideal fuel? Give reason (any three points) .	3
19.	.a) What is corrosion? Name the compound formed when silver and copper corrodes. b) Describe with an experiment the conditions essential for rusting of iron. Also draw diagram.	5
20.	a) Does zinc reacts with hydrochloric acid and sodium hydroxide. Justify your answer by giving balanced chemical equation. b) The pH of soil A is 7 and that of B is 4. Which of these two should be treated with chalk and why? c) What is water of crystallization in a salt? How would you justify experimentally that blue $CuSO_4$ crystals contain water of crystallization.	5

21	**a)** In the circuit diagram shown, the two wires X and Y are of the same length and same metal, but X is thicker than Y. Which ammeter will indicate a higher current strength, A_1 or A_2? Give reason to support your answer.  **b)** With the help of a diagram, derive the formula for equivalent resistance for three resistors connected in series.	2 3
22.	(a)What is the function of gastric glands present in the walls of stomach? (b) Show the process of nutrition in Amoeba with the help of a well labeled diagram	5
23.	Observe the experimental set up shown below:- a) What kind of response is shown by the plant to the given stimulus? b) Give a valid reason for your observation.  	5
24.	**a)** On what factors is the force experienced by a current – carrying straight conductor placed in a uniform magnetic field depends? **b)** Explain different ways to induce current in a coil with the help of a diagram.	2 3

SECTION-B

25.	Rajesh used a voltmeter and a milliammeter of least counts 0.1V and 5mA respectively to find the equivalent resistance of two resistors connected in series. He noted that the needle in voltmeter was on 18^{th} division and that of milliammeter on 12^{th} division. The equivalent resistance calculated by him will be :	1

	(a) 1.5 Ω (b) 30 Ω (c) 300 Ω (d) 450 Ω	
26.	The current flowing through a conductor and the potential difference across its two ends, as per readings of the ammeter and the voltmeter, are shown below :  The resistance of the conductor would be : (a) 0.15 Ω (b) 1.5 Ω (c) 15 Ω (d) 150 Ω	1
27.	While performing the experiment to study the dependence of current on potential difference across a resistor, the following observations were made by four students A, B, C and D. **(1)** **STUDENT** / **READING 1** / **READING 2** / **READING 3** **A**: V = 0.5 V, I = 0.1 A / V = 1.0 V, I = 0.2 A / V = 1.5 V, I = 0.3 A **B**: V = 0.8 V, I = 0.4 A / V = 1.6 V, I = 0.8 A / V = 2.4 V, I = 1.2 A **C**: V = 1.0 V, I = 0.5 A / V = 1.2 V, I = 1.4 A / V = 1.4 V, I = 1.0 A **D**: V = 2.4 V, I =0.8 A / V = 2.7 V, I =0.9 A / V = 3.0 V, I =1.0 A The student who made the wrong observation is : (a) A (b) B (c) C (d) D	1
28.	The resistance of an electric bulb drawing 12 A current at 6V will be: (a) 0.5 Ω (b) 5 Ω (c) 0.2 Ω (d) 2 Ω	1

29.	A student tested pH of distilled water with a pH paper and observe green colour.after adding a few drops of dilute NaOH solution, the pH was tested again. The colour change observed would be a) Blue b) Green c) Red d)Orange a)	1
30	A strip of copper was placed in a beaker containing Zinc sulphate solution. On observing the strip the next day, it was noticed that a)The copper strip remained same as it was b)The copper strip became thinner c)The copper strip became thicken d)The colour of strip changed.	1
31.	A student takes some zinc granules in a test tube and adds dilute hydrochloric acid to it. He would observe that the colour of the zinc granules changes to: a) White b) Brown c) Black d) Colorless	1
32.	Barium Sulphate is a)Colourless and soluble in water b)Blue in colour c)White and insoluble in water d)None of the above	1
33.	Which of the following is not observed when aluminium is added to a solution of copper sulphate? a)Solution is blue in the beginning b)Final solution is colouless c)Final solution is light green d) Brown mass is deposited on aluminium.	1
34	a)In the experimental set up to demonstrate respiration in germinating seeds, what role is played by potassium hydroxide? (b) Write the equation for aerobic respiration.	2
35.	What are the products formed when ferrous sulphate is heated strongly? Write balanced chemical equation of the above reaction?	2
36.	Write two precautions that must be taken while studying dependence of potential difference V across a resistor on the current I flowing through it. Show the nature of V - I graph.	2