

class - X

Science

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X - C

XIMVPD6

Red Rosses

MM. 90

Time : 3 h

## SUMMATIVE ASSESSMENT - I, 2016-17

### 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.

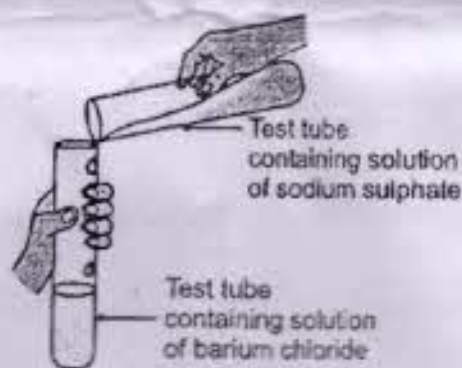
### SECTION-A

- ✓ 1 List two body functions that will be affected if medulla oblongata gets damaged. 1
- 2 Indicate the direction of the magnetic field outside a bar magnet. 1
- ✓ 3 Name any two non-conventional sources of energy. 1
- 4 List three products obtained in the chlor - alkali process. Which of these products is used for the manufacture of bleaching powder? 2
- 5 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? 2
- ✓ 6 (i) Name the respiratory pigment found in human beings. 2  
(ii) How is oxygen transported in our body?

7 (a) Define olfactory indicators. Name two substances which can be used as olfactory indicators. 3

(b) Choose strong acids from the following:  
 $\text{CH}_3\text{COOH}$ ,  $\text{H}_2\text{SO}_4$ ,  $\text{H}_2\text{CO}_3$ ,  $\text{HNO}_3$

8 Observe the given figure and answer the following questions : 3



- Write a balanced chemical equation for the above reaction.
- Name the type of reaction
- colour of the precipitate formed.

9 Describe an activity to find out the conditions under which iron rusts. 3

- State what happens when dilute hydrochloric acid is added to Sodium carbonate
  - How will you test for the gas?
  - What will happen if the gas is passed in excess?
- Give chemical equations

11 Define phytohormones. Explain the role of auxins in phototropism. 3

12 Draw a neat diagram of human alimentary canal. Label liver and pancreas on it and write their functions. 3

13 Explain any three methods used by plants to get rid of excretory products. 3

14 How much current will an electric iron draw from a 220 V source if the resistance of its element when hot is 55 ohms? Calculate the power of the electric iron when it operates on 220 volts. 3

- State the principle of motor and give its two practical applications.
- State Fleming's left hand rule.

- Calculate the resistivity of the material of a wire of length 1 m, radius 0.01 cm and of resistance 20 ohms. 3
- ✓17 Ankita visited a village and saw that cow dung cakes are still being used as fuel there. She decided to educate the villagers to create awareness among them about the other sources of energy. Villagers were very happy to know about the alternative sources of energy. Now answer the following questions : 3
- Why is the burning of cow dung cake not advisable?
  - Name two other sources of energy suggested by Ankita to the villagers.
  - What qualities of Ankita are reflected in her actions?
- ✓18 Differentiate between renewable and non-renewable sources of energy. Give two examples of each. 3
- 19 Define a chemical reaction. State four observations which help us to determine that a chemical reaction has taken place. Write one example of each observation with a balanced chemical equation. 5
- 20 (a) Draw neat and labelled diagram for electrolytic refining of copper 5  
 (b) write two differences between roasting and calcinations.  
 (c) Give an example of Termite reaction.
- ✓21 a) What are animal hormones? 5  
 b) Name the hormone :  
 (i) which brings changes in male humans during start of adolescence.  
 (ii) which coordinates the level of blood sugar.  
 (iii) Which helps the body to keep control on day and night wake up cycle?  
 (iv) Which prepares the body against any dangerous situation?
- 22 State Ohm's law. Draw graph between V and I for a metallic conductor. Define resistivity with unit. What is the effect of temperature on the resistivity of metals?
- 23 (a) Define a solenoid. Draw magnetic field lines produced by a current carrying solenoid. 5  
 (b) List three ways in which magnetic field strength of a current carrying solenoid can be increased.
- 24 (a) Define electric current. Give mathematical relation between electric current, charge and time. 5

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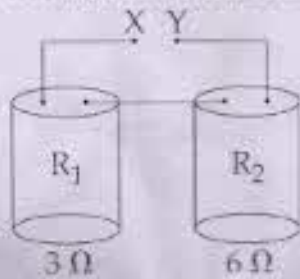
- (b) The filament of an electric lamp, which draws a current of 0.2 A for 5 hours. Calculate the amount of charge flowing through the circuit.
- (c) Connect 2ohm, 4 ohm and 6 ohm to get maximum current.

### SECTION - B

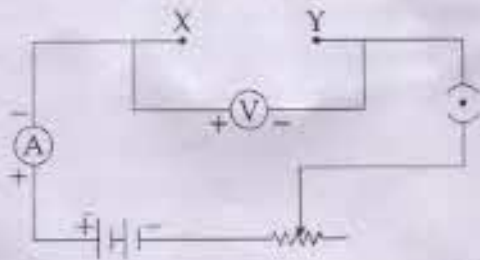
- 25 Test-tube I contains lemon-juice and test-tube II, contains baking soda solution, 1  
Rama dipped pH paper in each solution separately. The colour of pH observed by  
Rama in test-tube I and II respectively would be :
- (a) yellow and green  
(b) light blue and light red  
(c) light red and indigo  
(d) green and orange
- 26 Which of the following would turn red litmus into blue? 1
- (i) NaOH Solution (ii) CH<sub>3</sub>COOH Solution  
(iii) lemon juice (iv) NaHCO<sub>3</sub> Solution  
(a) i, iv (b) ii, iv (c) i, iii (d) iii, iv
- 27 A student found that a colourless and odourless gas 'Y' is produced when dil 1  
hydrochloric acid is added to solid sodium carbonate taken in a test tube. She  
inferred the gas 'Y' as :
- (a) hydrogen (b) carbon dioxide  
(c) carbon monoxide (d) sulphur dioxide
- 28 Raju puts an iron nail each in four test-tubes containing solutions of zinc sulphate, 1  
aluminium sulphate, copper sulphate and ferrous sulphate. He observed a reddish  
brown coating on the surface of the nail in the test tube which contains :
- (a) ferrous sulphate (b) Zinc sulphate  
(c) aluminium sulphate (d) copper sulphate
- 29 On adding copper metal to ferrous sulphate solution the colour of the solution : 1
- (a) Remains unchanged (b) Turns reddish - brown  
(c) Turns colourless (d) Turns blue

A student connects resistance of the coils  $R_1$  and  $R_2$  as given below.

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He then connects  $X$  and  $Y$  as shown in the circuit.



The average value of total resistance recorded in the circuit would be :

- (a)  $9\ \Omega$       (b)  $3\ \Omega$       (c)  $2\ \Omega$       (d)  $6\ \Omega$

31. Two unequal resistances are connected in parallel by a student. Which of the following is true?

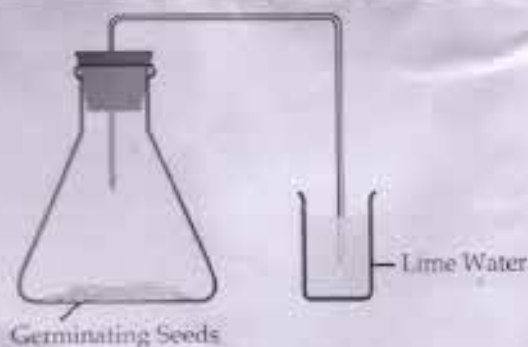
- (a) Current is same in both  
(b) Current is larger in higher resistance  
(c) Voltage-drop is same across both  
(d) Voltage drop is lower in lower resistance.

32. In the experiment to show that light is essential for photosynthesis, while boiling a leaf in alcohol, it is not heated directly over the burner because alcohol :

- (a) decomposes  
(b) reduces  
(c) is highly volatile and flammable.  
(d) harms the leaf

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In this experimental set-up, the lime water turns milky due to the :

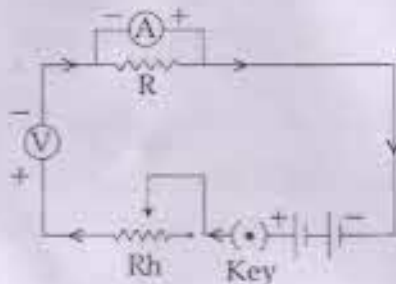
- (a) Oxygen released by germinating seeds.
- (b) Carbon dioxide is released by germinating seeds.
- (c) Presence of moisture in the delivery tube.
- (d) Both (a) and (c)

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34 A student prepares aqueous solutions of the following salts :

Copper sulphate, ferrous sulphate, Sodium sulphate, Barium chloride  
Write the colour of each solution thus formed.

35 To study the dependence of potential difference ( $V$ ) on current  $I$  flowing across a resistor  $R$  a student set a circuit diagram but he did not succeed. 2



- (i) Name the components which are in correct position in the circuit diagram.
- (ii) Name the components which are not in correct position in the circuit diagram.

36 While preparing a temporary mount of leaf peel to show stomata, Ankita put the cover slip on the peel taken on the slide directly in hurry. She could not observe stomata clearly using microscope. Mention the mistake made by her and the way to correct the mistake. 2

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