



V & C Patel English School
Half Yearly Exam

Std.: X

Subject: Science

Max Marks: 80

Date: 11/09/17

Time: 3 hrs.

General Instructions :

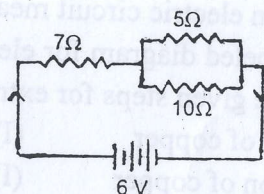
There are 27 questions. All questions are compulsory.

Question 1-2 (1Mark) , 3-5 (2 Marks) , 6-15 (3 Marks) , 16-21 (5 Marks),
22-27 (Practical based each of 2 Marks)

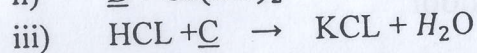
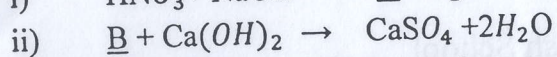
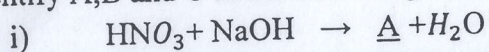
- The potential difference between the terminals of an electric heater is 60 V when it draws a current of 4A from the source. Find the resistance of heater when in use.
- What are antacids? Give two examples.
- What is induced current? Explain briefly two different ways to induce current in a coil.
- Give reason for the following:
 - School bells are made up of metals.
 - Electrical wires are made up of copper.
- With the help of a neat labeled diagram show how Amoeba captures its food.
What is the mode of nutrition in Amoeba?
- Distinguish between renewable and non renewable sources of energy. Also give an example of each of these sources.
- For the circuit shown in this diagram, calculate:
 - The resultant resistance
 - Total current
 - Voltage across 7Ω resistor
- List three major differences between bar magnet and solenoid in tabular form.
- One day ,Pankaj parked his car inside his garage and left for vacation of one month . On returning , he tried to start the car but the car did not start . He checked the fuel and engine oil but that were also full. So, he called an engineer . Engineer, after examining the car, connected the charged battery . Then the car started at once
 - In which combination , the batteries are connected ?
 - Draw a circuit diagram for the above said combination .
 - What moral value does we got ?
- State an activity to show a double displacement reaction. Give the chemical equation of the reaction that take place. Write the physical state of the product obtained.

OR

- A student adds water to quicklime taken in a beaker.He feels the beaker turning hot.Why does this happen?Write a chemical equation for the reaction.State the type of this reaction.



11. Identify A,B and C in the following reactions and write the chemical name of A,B and C.



12. i) Show the formation of MgO by the transfer of electrons in the two elements using electron-dot structures.

ii) In which solvent the ionic compounds are generally soluble.

iii) Why are aqueous solutions of ionic compounds able to conduct electricity?

13. What do the following transport?

(1) Xylem (2) Phloem (3) Pulmonary vein (4) Vena cava

(5) Pulmonary artery (6) Aorta

14. (1) Name one organ where growth hormone is synthesized in

(a) Human beings (b) Plants

(2) 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 type of movement.

OR

What is bile Name the gland that secret bile? Explain the role of bile in digestion of fats in human digestive system.

15. What is a synapse? How nerve impulse travels through synapse? Explain.

16. What is an electromagnet ? List its two uses .Draw a labeled diagram to show how an electromagnet is made. What is the purpose of the soft iron core used in making an electromagnet ?

17. i) Define the unit of current . Name the instrument used to measure electric current. How is it connected in a circuit ?

ii) What does an electric circuit mean? Distinguish between an open and a closed circuit.

18. Draw a well labeled diagram for electrolytic refining of copper and write the reactions involved for the given steps for extraction of copper from its ore.

a) Roasting of copper (I)sulphide.

b) Reduction of copper (I) oxide with coppe (I)sulphide.

c) Reaction occurs at Cathode and Anode.

19 (a) What is meant by "water of crystallization" in a substance? Explain with an example.

(b) What is chlor-alkali process? Write chemical equation. Which gas is evolved at cathode and anod?

20. (i) Draw a neat and labeled diagram of a nephron.

(ii) Why is double circulation necessary in birds and mammals?

21. (i) What is a reflex action? Explain it with the help of an example where the stimulus is heat.

(ii) Why it is advised to take iodised salt?

OR

i) Why is adrenaline called as an emergency hormone? Explain.

ii) Name an inhibitory phytphormone? List the functions performed by it.

22. Three Identical bulbs are connected in parallel, potential difference across each bulb is 4.5

V. When all the three bulbs glow together, current of 3A is recorded by ammeter. How much power is dissipated in the circuit when all the three bulbs glow together?

23. What happens to the force acting on current carrying conductor placed in magnetic field when

- i) Direction of magnetic field is reversed without changing the direction of current.
- ii) Direction of both the current and the magnetic field is reversed.

24. An aluminium can is used to store ferrous sulphate solution. It is observed that in few days, holes appeared in the can. Explain the observation and write chemical equation to support your answer.

25. While diluting an acid, why is it recommended that acid should be added to water and not water to acid?

26. What controls the opening and closing of stomatal pore and how?

27. Why are germinating seeds used to demonstrate experiments on respiration?

What is the role of KOH and lime water used in the experiment?

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2. What are antacids? Give two examples.

3. What is induced current? Explain briefly two different ways to induce current in a coil.

4. Give reason for the following:

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5. With the help of a neat labeled diagram show how Amoeba captures its food.

What is the mode of nutrition in Amoeba?

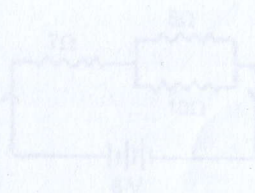
6. Distinguish between renewable and non renewable sources of energy. Also give an example of each of these sources.

7. For the circuit shown in this diagram, calculate:

i) The resultant resistance

ii) Total current

iii) Voltage across 7Ω resistor



8. List three major differences between bar magnet and solenoid in tabular form.

9. One day Pankaj parked his car inside his garage and left for vacation of one month. On returning, he tried to start the car but the car did not start. He checked the fuel and engine oil but that were also full. So, he called an engineer. Engineer, after examining the car, connected the charged battery. Then the car started at once.

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iii) What moral value does we got?

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