

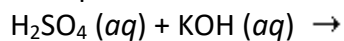
CBSE Class 10 Science Sample Paper

Section-I: Choose the correct answers:

(15 x 1 =15 marks)

1. Green plants are the first living organism in a food chain. Where do plants get the energy that they pass along to the primary consumers in their food chains?
 - A. From decomposers
 - B. From the Sun
 - C. From secondary consumers
 - D. From other plants
2. _____ provide evidence that living things evolved from earlier species.
 - A. Fossils
 - B. Videos of dinosaurs
 - C. Religions
 - D. Historical fictions
3. The muscles of the body are part of the musculoskeletal system but would not operate without the _____ system providing the impulses that cause the muscles to act.
 - A. Respiratory
 - B. Cardiovascular
 - C. Nervous
 - D. Reproductive
4. An unknown element is a soft metallic solid. It is highly reactive and has a low melting point. In which group of the periodic table is it most likely to be found?
 - A. 2
 - B. 18
 - C. 1
 - D. 17

5. What products are formed during the following reaction?



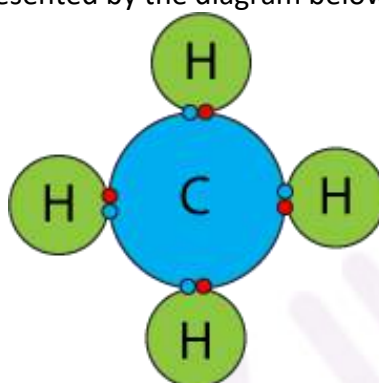
KH and SO_2

K, SO_2 and H_2O

KS, O_2 and H_2

K_2SO_4 and H_2O

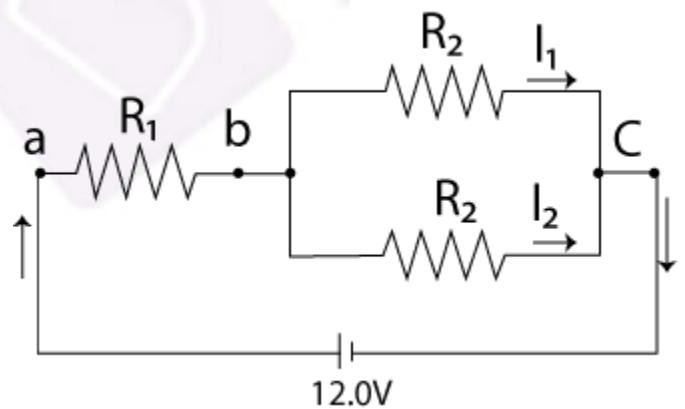
6. What type of bond is represented by the diagram below?



● electron from hydrogen
● electron from carbon

- A. Metallic bond
 - B. Hydrogen bond
 - C. Ionic bond
 - D. Covalent bond
7. Which of the following materials is the best conductor of electricity?
- A. Wood
 - B. Rubber
 - C. Plastic
 - D. Iron
8. Which of these is required to make a circuit?
- A. Two batteries

- B. A light bulb
- C. Static electricity
- D. A closed loop
9. Two parents with blue eyes have a child with blue eyes. What colour eyes will their second child most likely have?
- A. blue
- B. green
- C. black
- D. brown
10. What happens in the process of water cycle?
- A. Water transforms into other types of liquid.
- B. Water changes from one state to another.
- C. Water keeps the same physical properties.
- D. Water becomes a gas in between each step.
11. In the circuit shown below, assume $R_1 = 3.5 \Omega$, $R_2 = 1.0 \Omega$, and $R_3 = 1.0 \Omega$. The battery in the circuit has an electric potential of 12.0 V.



A current of _____ travels through resistor R_2 , and the voltage drop across this resistor is _____.

- A. 2.0 A, 2.0 V
- B. 1.5 A, 1.5 V
- C. 1.5 A, 3.0 V
- D. 1.0 A, 2.0 V
- E. 3.0 A, 3.0 V

12. According to the Arrhenius definition, an acid is a substance that -

- A. Increases the pH when it forms a water solution.
- B. Receives an H^+ ion from water.
- C. Donates an H^+ ion to a base.
- D. Increases the concentration of H^+ ions when dissolved in water.
- E. Reacts with a base to form a salt.

13. Which of the following elements has the most metallic character?

- A. beryllium (Be)
- B. silicon (Si)
- C. sodium (Na)
- D. francium (Fr)
- E. copper (Cu)

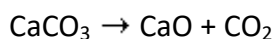
14. Examine the Punnett square below, which represents a cross between a male and a female pear tree.

	B	B
B	?	?
b	?	?

What are the possible genetic variations of offspring in this cross?

- A. BB
- B. Bb
- C. Bb

15. Calcium carbonate (CaCO_3) is heated and decomposes to form calcium oxide (CaO) and carbon dioxide (CO_2).



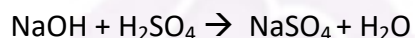
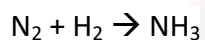
Which statement is true about the difference between calcium carbonate and calcium oxide?

- A. Calcium oxide has different physical properties and the same chemical properties.
- B. Calcium oxide has the same physical properties and the same chemical properties.
- C. Calcium oxide has the same physical properties and different chemical properties.
- D. Calcium oxide has different physical properties and different chemical properties.

Section II: Each question carries 1 mark

(5 x 1= 5 marks)

1. Balance the following chemical equations?



- 2. Define synapse?
- 3. Name two sexually transmitted diseases?
- 4. What is a food chain and food web?
- 5. Give any two functions of stomata?

Section III: Each question carries 2 marks:

(9 X 2= 18 marks)

- 1. What is Myopia and hyperopia?
- 2. Write 4 disadvantages of hydropower?
- 3. Write the difference between renewable and non-renewable resources?

4. Write notes on thalamus and its function?
5. How is pulse taken in the humans?
6. Write the balanced chemical equations for the following reactions?
 - i) Aluminum + Copper chloride \rightarrow Aluminum chloride + Copper.
 - ii) Zinc + silver Nitrate \rightarrow Zinc nitrate + silver
7. Which groups of elements are called noble gas elements? What are they?
8. What is transpiration?
9. Define inheritance? Give an example?

Section IV: Each question carries 3 marks:

Short answer type questions:

(9 x 3 = 27 marks)

1. Define a chemical equation? How do you balance a chemical equation?
2. Give at least three functions of small and large intestine?
3. What is placenta and mention its role?
4. Describe Mendel's dihybrid cross in pea plant in a punnet checker board?
5. Write the difference between series and parallel resistors?
6. Explain right hand thumb rule with the help of a diagram?
7. What are food webs? Explain food webs with one example.
8. Write the difference between producers, consumers and decomposers? Give two examples for each?
9. Write a short note on nitrogen fixation?

Section V: Each question carries 5 marks:

Long answer type questions:

(3 x 5 = 15 marks)

1. What is water cycle and write the steps involved in the process of this cycle?

Or

Explain the structure of cerebrum with a figure?

2. With a labelled diagram explain the structure if human heart?

Or

Write the types of chemical reactions and give two examples for each reaction?

3. Explain the mechanism of stomata transpiration?

Or

Which physical and chemical properties of the elements were used by Mendeleev in creating his *periodic table*?

