

C-5-X

Roll No.....

Total No. of Questions : 18]

[Total No. of Printed Pages : 8

XWZJDRO/N19

24705-X

SCIENCE

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(Physics, Chemistry & Life Science)

Time : 3 Hours]

[Maximum Marks : 84

Section-A

(PHYSICS)

(Long Answer Type Questions)

1. State Ohm's law and describe a method to find the resistance of a coil by using a voltmeter and an ammeter. Also draw the circuit diagram.

Or

What is the resultant resistance when a number of resistances are connected in :

(a) Series

(b) Parallel

6

Turn Over

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(Short Answer Type Questions)

4 each

2. Draw the well labelled diagram of an eye of human being.

Or

What are common defects of vision ? Name them.

3. Write the uses of concave and convex mirrors.

Or

Write the sign conventions used for reflection by mirror.

4. Draw the ray diagram and find the nature, position and relative size of image formed by a concave lens at :

- (i) infinity
- (ii) between optical centre and infinity

Or

An object is placed at a distance of 10 cm from a convex mirror of focal length 15 cm. Find the position and nature of the image formed.

(Very Short Answer Type Questions)

2 each

5. (i) Write the *two* differences between convex and concave lens.
(ii) Draw a labelled diagram of an electric motor.
(iii) Name *two* devices that run with solar cooker.

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(Multiple Choice Questions)

1 each

6. (i) The biogas produced after decomposition of waste organic matter contains :
- (A) Methane (B) Carbon dioxide
(C) Hydrogen sulphide (D) All of these
- (Choose the correct answer)
- (ii) Bi-focal lenses are used in case when a man is suffering from :
- (A) Myopia
(B) Hypermetropia
(C) Both myopia and hypermetropia
(D) Astigmatism
- (Choose the correct answer)
- (iii) Magnetic effect of current was discovered by :
- (A) Henry (B) Oersted
(C) Maxwell (D) Faraday
- (Choose the correct answer)
- (iv) The material suitable for making a permanent magnet is :
- (A) Steel (B) Copper
(C) Iron (D) Aluminium
- (Choose the correct answer)

Section-B

(CHEMISTRY)

(Long Answer Type Questions)

7. What is an isomerism ? How many structural isomers can you draw for pentane ?

Or

Describe the substitution and addition reactions as chemical properties of carbon compound.

6

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(Short Answer Type Questions)

4 each

8. Write two methods for obtaining a metal from its oxide ore.

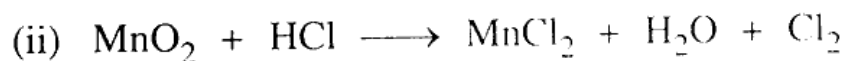
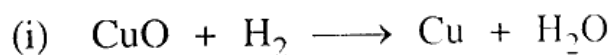
Or

Discuss any *four* physical properties of metals.

9. Write the steps involved in writing a chemical equation.

Or

Identify the substances that are oxidised and the substances that are reduced in the following reactions :



10. Write the uses of washing soda.

Or

How do acids and base react metals ? Write the reaction for each reaction.

(Very Short Answer Type Questions)

2 each

11. (i) Name any *four* elements with filled outermost shells.
(ii) In the modern periodic table which are the metals among the first ten elements ?
(iii) What is Hydrogenation ?

(Multiple Choice Questions)

1 each

12. (i) Which of the following acids is used as a component of baking powder ?

(A) Acetic acid

(B) Tartaric acid

(C) Lactic acid

(D) Citric acid

(Choose the correct answer)

(ii) $\text{Zn} + \text{HCl} \longrightarrow \text{ZnCl}_2 + \text{H}_2$ is a reaction known as :

(A) Decomposition reaction

(B) Exothermic reaction

(C) Displacement reaction

(D) Endothermic reaction

(Choose the correct answer)

(iii) An alloy of copper and tin is known as :

(A) Brass

(B) Solder

(C) Bronze

(D) Amalgum

(Choose the correct answer)

(iv) The best conductor of electricity among the following is :

(A) Silver

(B) Gold

(C) Platinum

(D) Astatine

(Choose the correct answer)

Section-C

(LIFE SCIENCE)

(Long Answer Type Questions)

13. What is Nutrition ? What are the differences between autotrophic and heterotrophic nutrition ?

Or

Describe the structure and function of Nephron. Draw the labelled diagram.

6

(Short Answer Type Questions)

4 each

14. How is sex of a child determined in human beings ?

Or

What are the different ways in which individuals with a particular trait may increase in a population ?

15. Name the Hormones secreted by Thyroid, Pancreas, Ovary and Testis.

Or

Describe the structure of Neuron with the help of labelled diagram.

16. What is Vegetative propagation ? Also give its advantage.

Or

Draw a labelled diagram of longitudinal section of flower.

(Very Short Answer Type Questions)

2 each

17. (i) Define Regeneration with an example.
(ii) Explain the term water harvesting.
(iii) What is an ecosystem ? What are its components ?

(Multiple Choice Questions)

1 each

18. (i) Deforestation generally decreases :
(A) Rainfall
(B) Soil erosion
(C) Drought
(D) Global warming (Choose the correct answer)
- (ii) Non-conventional sources of energy is :
(A) Coal
(B) Wood
(C) Petroleum
(D) Biogas and Solar energy (Choose the correct answer)
- (iii) Nature's cleaners are :
(A) Producers
(B) Consumers
(C) Decomposers
(D) Carnivores (Choose the correct answer)

- (iv) Which of the following are environment friendly practices ?
- (A) Carrying cloth-bags to put purchases in while shopping
 - (B) Switching off unnecessary lights and fans
 - (C) Walking to school instead of getting your mother to drop you on her scooter
 - (D) All of these
- (Choose the correct answer)

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