

Roll No.....

C-5-Z

Total No. of Questions : 18]

[Total No. of Printed Pages : 8

XWZJDRO/N19

24705-Z

SCIENCE

(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

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Turn Over

C-5-Z

(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* uses biogas.

(Multiple Choice Questions)

1 each

6. (i) Which of the following is not an example of a bio-mass energy source ?
- (A) Wood (B) Gobar gas
(C) Nuclear energy (D) Coal
- (Choose the correct answer)
- (ii) Hypermetropia is corrected by :
- (A) Convex lens (B) Concave lens
(C) Cylindrical lens (D) None of these
- (Choose the correct answer)
- (iii) At the time of short circuit the current in the circuit :
- (A) Decreases (B) Increases
(C) Does not change (D) Vary continuously
- (Choose the correct answer)
- (iv) An electric motor converts :
- (A) Electric energy into mechanical energy
(B) Mechanical energy into electric energy
(C) Electric energy into magnetic energy
(D) Magnetic energy into mechanical energy
- (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

(Short Answer Type Questions)

4 each

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

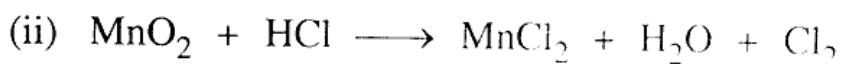
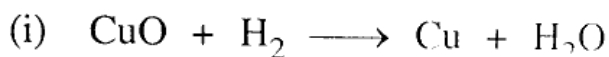
Or

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 : <https://www.jkboseonline.com>



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 homologous series ?

(Multiple Choice Questions)

1 each

12. (i) Acid turn methyl orange :

(A) Green

(B) Blue

(C) Red

(D) Black

(Choose the correct answer)

(ii) Addition of oxygen to a substance in a chemical reaction is termed as :

(A) Reduction

(B) Oxidation

(C) Displacement

(D) None of these

(Choose the correct answer)

(iii) The only element among non-metal that exists in liquid state at room temperature is :

(A) Chlorine

(B) Bromine

(C) Sulphur

(D) Phosphorus

(Choose the correct answer)

(iv) Which metal is kept immersed in kerosene oil ?

(A) Sodium

(B) Silver

(C) Gold

(D) Zinc

(Choose the correct answer)

Section-C

(LIFE SCIENCE)

(Long Answer Type Questions)

13. What is Nutrition ? What are the differences between autotropic and heterotropic 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) Define Food chain and Food web.

(Multiple Choice Questions)

1 each

18. (i) The term ecosystem was introduced by :

(A) Miller

(B) Haldane

(C) Tansley

(D) Darwin

(Choose the correct answer)

- (ii) Which of the following constitute a food chain ?

(A) Grass, Wheat and Mango

(B) Grass, Goat and Human

(C) Goat, Cow and Elephant

(D) Grass, Fish and Goat

(Choose the correct answer)

Turn Over

(iii) Greatest problem for water conservation is to reduce the amount of :

(A) Runoff water

(B) Evaporation

(C) Precipitation

(D) Ground water

(Choose the correct answer)

(iv) River Jhelum originate from :

(A) Chashma Verinag

(B) Wuller lake

(C) Dal lake

(D) None of these

(Choose the correct answer)

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