



Section A

Write the answer of the following questions. [Each carries 1 Mark] [24]

1. Potato chips manufacturers usually flush bags of chips with which inert gas to prevent the chips from getting oxidised ?

- (A) Oxygen (B) Hydrogen (C) Chlorine (D) Nitrogen

2. Define : Corrosion

3. Define : Precipitation reaction.

4. True or False : As the pH value of a solution increases from 7 to 14, it represents a decrease in concentration of H^+ ions.

5. Write the chemical name of substance which is used by doctor to cure bone fracture.

6. Butanone is a four-carbon compound with the functional group.

- (A) Carboxylic acid (B) Aldehyde (C) Ketone (D) Alcohol

7. Butanone is a four-carbon compound with functional group.

8. The first member of homologous series of alkane is (propane, methane, ethane)

9. True or False : There is a single bond present between carbon-carbon atoms of unsaturated hydrocarbon.

10. Match the following type of Asexual reproduction with correct examples.

Type of Asexual Reproduction Examples

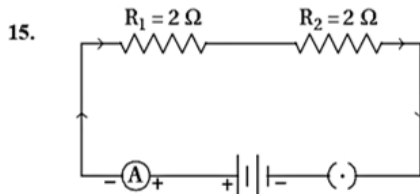
- (i) Fragmentation (a) Planaria
(ii) Regeneration (b) Amoeba
(c) Spirogyra

11. The metal is found in liquid state at room temperature. (mercury, calcium, sodium)

12. True or False : Solder, an alloy of lead and tin has high melting point.

13. The vegetative propagation by leaf is found in (Bryophyllum, Rose, Grape)

14. True or False : Galvanisation is a method of protecting steel and iron from rusting.



..... is the equivalent resistance in the given diagram. ($\frac{1}{4}\Omega$, 1Ω , 4Ω)

16. Which pair from the following is not appropriate ?

- (A) Conductor - Silver
(B) Alloy - Nichrome
(C) Insulator - Nickel

17. Which of the following terms does not represent electrical power in a circuit ?

- (A) I^2R (B) IR^2 (C) VI (D) $\frac{V^2}{R}$

18. An electric bulb is rated 220 V and 100 W. When it is operated on 110 V, the power consumed will be -

- (A) 100 W (B) 75 W (C) 50 W (D) 25 W

19. According to Ohm's law :

- (A) as the current increases in the circuit, resistance also increases.
(B) as the voltage increases in the circuit, resistance also increases,
(C) as the voltage increases in the circuit, current also increases,
(D) as the voltage increases in the circuit resistance and current both are increases,

20. SI unit of electric charge is

21. Column - I

Column - II

- (i) Myopia (a) Nearby object is seen clearly
(ii) Hypermetropia (b) Far object is seen clearly
(c) Power of accommodation decreases

22. Presbyopia can be corrected by lens,

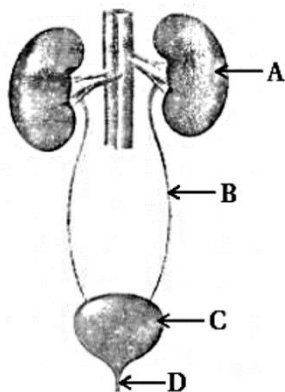
- (A) Convex (B) Concave (C) Bi-focal (D) Contact

23. Give example of biodegradable substance from the following -
 (A) Glass (B) Shrub (C) Plastic (D) Polythene
24. Which of the following elements does not form ecosystem ?
 (A) Biocomponents (B) Plastic bags
 (C) Non-biotic components (D) All of the above

Section B

Write the answer of the following questions. [Each carries 2 Marks] [any 9] [18]

25. Oil and fat containing food items are flushed with nitrogen. Why ?
 26. Write the four physical properties of metals.
 27. Write any two general properties of ionic compounds.
 28. Write differences between soaps and detergents.
 29. From the figure below, identify the names of parts A, B, C, D of excretory system in human being.
 {Urinary Bladder, Kidney, Urethra, Ureter}



30. Give difference : Arteries - Veins
 31. Differentiate b Aerobic respiration and Anaerobic Respiration
 32. What are the changes seen in girls at the time of puberty ?
 33. Draw a neat labelled diagram of longitudinal section of a flower.
 34. Write uses of concave mirror.
 35. Explain the practical applications of Heating effect of electric current with examples.
 36. Draw the symbols of the following p in an electric circuit,
 a) Combination of cells
 b) Plug Key (closed)
 c) Wires crossing (without joining)
 d) A variable resistance
 37. Write a note on Biological magnification ?

Section C

Write the answer of the following questions. [Each carries 3 Marks] [any 6] [18]

38. Draw the structure of neuron and explain its function.
 39. What is Reflex arc ? Draw a neat labelled diagram of Reflex arc.
 40. Explain thermit process with equation.
 41. Ramesh has two daughters and his wife Maya is pregnant again. He desires to have a son. So he forces his wife Maya to go for hy for sex determination of the child.
 (a) Who is responsible if the child born is a girl or boy ? Father's or Mother's sex chromosome.
 (b) In case of Ramesh's daughters which set of sex chromosome is not present in them ?
 (c) Is sex determination test illegal ? Why ?
 42. (a) Draw a neat labelled ray diagram for the formation of image by a concave mirror, When the object is place at centre of curvature. (b) Write the uses of concave mirror.
 43. A concave lens has focal length of 15 cm. At what distance should the object from the lens be placed so that it forms an image at 10 cm from the lens ? Also, find the magnification produced by the lens,
 44. What is magnetic field ? Draw magnetic field lines around a bar magnet. Write the properties of magnetic field lines.
 45. Explain the following term :
 (i) Ecosystem (ii) Food chain (iii) Biological magnification
 46. Answer the following questions: a) Explain the formation of Ozone with equations.
 b) How can you help in reducing the problem of waste disposal ? Write your opinions ?

Section D

Write the answer of the following questions. [Each carries 4 Marks] [any 5] [20]

47. How is plaster of paris formed ? Write an equation to show the reaction between plaster of paris and water, Write uses of plaster of paris.

48. Answer the following questions ;

a) Explain the importance of pH in human digestive system.

b) Explain the importance of pH change as the causes of tooth decay.

49. Draw a neat labelled diagram of human alimentary canal. Write the role of saliva and role of hydrochloric acid in digestion of food.

50. Draw the schematic sectional view (diagram) of human heart and also describe the circulation of blood in heart.

51. a) Draw a neat labelled diagram of human male reproductive system.

b) Write the functions of testis.

52. A person is sitting in a library. He is able to read the details of the wall of the library which is at a distance of 15 feet. He is not able to read the printed letters clearly of a book in front of him.

Answer the following questions on the basis of the above case.

a) What is the defect of vision of the person ?

b) Write the conditions of how this defect arises ?

c) How will you correct this defect ? Also draw a diagram showing the correction of this defective eye of the person.

53. What is dispersion of light ? Explain the dispersion of light by the glass prism with a diagram.

54. Answer the following questions :

a) Draw a schematic diagram of domestic electric circuit.

b) What is the importance of fuse and earth wire in domestic electric circuit ?