

This Question Paper contains 12 printed pages.
(Sections - A, B, C & D)

Sl.No. 029979

11 (E)
(MARCH/APRIL, 2022)

Time : 3 Hours]

[Maximum Marks : 80

Instructions :

- 1) Write in a clear legible handwriting.
- 2) This question paper has four Sections A, B, C & D and Question Numbers from 1 to 54.
- 3) All questions are compulsory. There are only internal options.
- 4) The numbers to the right represent the marks of the question.
- 5) Draw neat diagrams wherever necessary.
- 6) New sections should be written in a new page. Write the answers in numerical order.

SECTION - A

185

45

Answer the questions 1 to 24 as directed. Each question carries 1 mark.[24]

Choose the correct option from given options :-

- 1) ✓ Potato chips manufacturers usually flush bags of chips with which inert gas to prevent the chips from getting oxidised? [1]
- (A) Oxygen
- (B) Hydrogen
- (C) Chlorine
- ✓ (D) Nitrogen

2) Butanone is a four-carbon compound with the functional group [1]

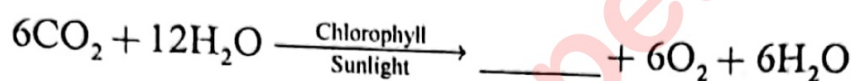
(A) Carboxylic acid

(B) Aldehyde

(C) Ketone

(D) Alcohol

3) Choose the correct option to complete the following reaction. [1]



(A) $\text{C}_2\text{H}_5\text{OH}$

(B) $\text{C}_6\text{H}_{12}\text{O}_6$

(C) CH_4

(D) CH_3COOH

4) Which metal is used for inter connection of cells in solar panel? [1]

(A) Silver

(B) Copper

(C) Cobalt

(D) Iron

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5) If the object is placed at 40cm in front of plane mirror, what will be the distance between object placed and image formed? [1]

(A) 40 cm

2 (B) 80 cm

(C) 20 cm

(D) 60 cm

6) What is the least distance of distinct vision for a young adult with normal vision? [1]

(A) 25 m

(B) 2.5 cm

(C) 25 cm

(D) 2.5 m

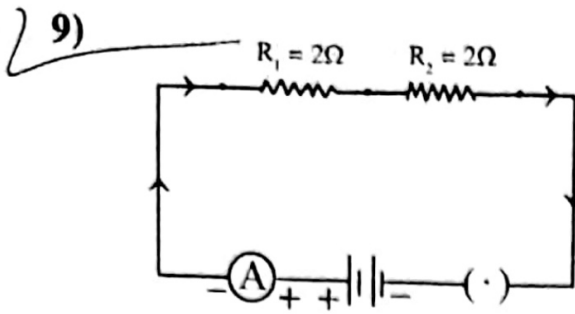
Fill in the blanks with correct answer :-

7) _____ is used as a catalyst in the hydrogenation of vegetable oils. [1]

(Nickel, Calcium, Carbon)

8) The element _____ has the electronic configuration 2,8,2. [1]

(Aluminium, Magnesium, Sodium)



_____ is the equivalent resistance in the above diagram. [1]

$$\left(\frac{1}{4} \Omega, 1 \Omega, 4 \Omega \right)$$

10) In somatic cells of human being, the chromosomes are found in _____ pairs. [1]

(22, 23, 46)

11) _____ mirror is used in the head lights of a car. [1]

(Concave, Convex, Plane)

12) The device used for producing electric current is called _____. [1]

(generator, ammeter, motor)

State if following statements are true or false.

13) Tooth decay starts when pH of the mouth is lower than 5.5. True [1]

14) The outermost shell of noble gases have 7 electrons. True [1]

25) Vegetative propagation takes place in the buds produced in the notches along the margins of Bryophyllum leaf. *False* [1]

16) Carbon-di-oxide is a green house gas. *True* [1]

17) Solder, an alloy of lead and tin has high melting point. *True* [1]

18) Absciscic acid is a plant hormone which promotes growth. *True* [1]

Answer the following questions as directed in one word or a sentence.

19) Write the chemical formula of Bleaching powder? CaOCl_2 [1]

20) The breakdown of pyruvate to give carbondioxide, water, energy takes place in which organelle? *Small Intestine* [1]

21) I measure the electric current. Which device am I? *ammeter* [1]

22) Write full form of AC and DC? *alternative current and Direct current* [1]

23) What are fossil fuels? [1]

- 24) Match the following type of Asexual reproduction with correct examples. [1]

Type of Asexual Reproduction		Examples	
1 2 i) ✓	Fragmentation	a)	Planaria
ii) ✗	Regeneration	b)	Amoeba 2
		c)	Spirogyra 1

SECTION - B

8

2

Question No. 25-37 each carries 2 marks. Answer in short in 40-50 words approximately. Attempt any 9 questions only. [18]

- 25) What are isomers? Draw the structural formulas of butane. [2]
- 26) Write differences between Soaps and Detergents. [2]
- 27) The position of three elements A, B, C in the periodic table are shown below. [2]

Group 16

Group 17

-

-

-

A

-

-

B

C

- a) State whether A is metal or nonmetal
- b) State whether C is more reactive or less reactive than A.
- c) Will C be a larger or smaller in size than B.
- d) Which type of ion, cation or anion will be formed by element A?

- 28) Draw a neat labelled diagram of Neuron? [2]
- 29) How does phototropism and geotropism occur in plants? [2]
- 30) What is pollination? Explain difference between self pollination and cross pollination. [2]
- 31) What are the changes seen in the boys at the time of puberty? [2]
- 32) Draw a diagram of sex determination in human being. [2]
- 33) Explain the terms analogous and homologous organs with examples. [2]
- 34) What is reflection of light? Write laws of reflection of light. [2]
- 35) Write uses of concave mirror. [2]
- 36) How much work is done in moving a charge of 2C across two points having potential difference of 12V? [2]
- 37) What is ozone and how does it affect any ecosystem? [2]

SECTION - C



Question No. 38-46 each carries 3 marks. Answer in short in 60-80 words approximately. Attempt any 6 questions only. [18]

- 38) Write differences between endothermic reactions and exothermic reactions? [3]
- 39) Write physical properties of metals? [3]
- 40) Write different ways of prevention of corrosion of metals. [3]
- 41) Write Mendeleev's Periodic Law? Explain achievements of Mendeleev's Periodic table. [3]
- 42) Explain the different methods of contraception? [3]
- 43) A convex mirror used for rear-view on an automobile has a radius of curvature of 3.00 m. If a bus is located at 5.00 m from this mirror, find the position, nature and size of the image. [3]
- 44) Draw a labelled diagram of solar cooker? Write the advantages and disadvantages of using a solar cooker? [3]

45) Explain the following term :-

[3]

i) Ecosystem



ii) Food chain

iii) Biological magnification

46) Explain the three R's : Reduce, Recycle, Reuse to save the environment. [3]

SECTION - D



Question No. 47-54 each carries 4 marks. Answer in long in 90-120 words approximately. Attempt any 5 questions only. [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. [4]

48) Compounds such as alcohols and glucose also contain hydrogen but are not categorised as acids. Describe an activity to prove it. [4]

49) Draw a neat labelled diagram of human alimentary canal. Write the role of saliva and role of hydrochloric acid in digestion of food. [4]

50) Explain the nutrition in Amoeba with a neat labelled diagram. [4]

51) What is Dispersion of white light by a glass prism? Explain the dispersion of white light by the glass prism with a diagram. [4]

52) Let the resistors in parallel connection be R_1, R_2, R_3 . Derive an equation to find equivalent resistance $\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$ in a parallel connection. [4]

53) What is magnetic field? Draw magnetic field lines around a bar magnet. Write the properties of magnetic field lines. [4]

54) State the principle, construction and working of an electric motor with a neat labelled diagram. [4]



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