Sample Paper – 2008
Class – X
Subject – Science

Time: 2:30hrs+15mintues   mm60

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General Instructions

1. The question paper comprises of two sections A and B. You are to attempt both

   the sections.

2. All questions are compulsory.

3. There is no overall choice However, internal choice has been provided in all the

   three questions of five marks category. Only one option in such questions is to be

   attempted.

4. All questions of section A and all questions of section B are to be attempted

   separately.

5. Questions 1 to 6 in section A and 17 to 19 in section B are short question. These

   carry one mark each.

6. Questions 7 to 10 in section A and 20 to 24 in section B are short answer type

   questions and carry two marks each.

7. Questions 11 to 14 in section A and 25 to 26 in section B are also short answer

   type questions and carry three marks each.

8. Questions 15 and 16 in section A and question 27 in section B are long answer

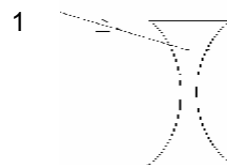   type questions and carry five marks each.

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Section A

1. $CaSO_4 . 2H_2O \xrightarrow{\text{?????????????}} CaSO_4 . \frac{1}{2}H_2O + 1\frac{1}{2}H_2O$

Fill the temperature required for the reaction. Whether formula for P-O-P, $CaSO_4 \cdot \frac{1}{2} H_2O$ is possible .if not write its accurate formula [ANSWER IS] :-373K , $(CaSO_4)_2 \cdot H_2O$ [calcium sulphate hemihydrates] 1

2. Is oxidation and reduction reaction go hand in hand. Give an example.   1

3. Complete the ray diagram. Also label its angle of incident   1

4 Define one ampere. Calculate the number of electron constitute one coulomb of charge.   1

5 During Ohm's law which of reading may be wrong?

V	2	4	6
I	0.4	0.6	1.2

6   Why nitrogen or argon like noble gases are filled in electric bulbs   1

7.   Write the balance chemical equation

   (a) Aluminium + Copper chloride → Aluminium chloride + copper

   (b)Metal carbonate + Sulphuric acid → --------- +-----------

    Name the gas produced, is it combustible   [1+1]

8.   The near point of a hypermetropic eye is 1m. What is the power of the lens required to correct this defect? Assume that the near point of normal eye is 25cm.   2

9   [a] How can 2Ω, 3Ω, and 6Ω are connected to give total resistance of (a) 4Ω (b) 1Ω

   [b]Two heaters each of 500watt operated 8 hours per day. What is cost of energy to operate it for the month of Nov. @ Rs. 4 per unit?   1+1

10.   A copper wire has diameter 0.2mm and resistivity of 1.6×10^{-8} ohm meter. What will be the length of this wire to make its resistance 56 ohm? How much does the resistance change if the diameter is doubled?   [1 +1]

11   What is an electric motor? Write the principle and roll of half ring commutattor in DC motor? What is the frequency of AC in India?   [1 /2+1+1+1/2]

12.   Write electron dot structures of CaO, benzene, cyclohexane, H_2S, S_8 and CO_2 3

13   [a]. What is precipitation reaction, give example?

   [b] Define rancidity, how it occur?

[c]Why chemical equations should be balance?   1x3

14.[a]

3	4	5	6	7	8	9	10
Lithium			Carbon		Oxygen	L	Neon
X			E		G	Q	
Y						R	
Z						T	

Answer the following questions

(a) Give the letters having valency one

(b) Which element have small atomic size between X and Q

(c) Which type of compounds will be formed between E and L?

(d)Write the formula of compound made by elements Y and G

[b] Write the two merits of Mendeleev's periodic table   2+1

15.   [i]   What is aqua regia, Amphoteric oxide, ore, and gangue?

       [ii]   Write flow chart in the extraction of a metal?

[iii]   Name one metal which will displace hydrogen from dilute acids, and one metal which will do not.
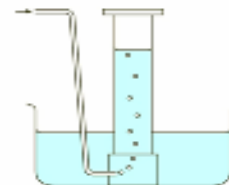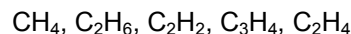
[iv].   Write importance of PH. in daily life.   [2+1+1+1]

Or

[i]   Write the structural formula, 2, 2-dimethyl propane, Butanone, Bromopentane,.2,3- methyl

butane?

[ii]   Explain the mechanism of the cleaning action of soaps

[iii]   Identify the hydrocarbon that turns bromine water colorless

CH_4, C_2H_6, C_2H_2, C_3H_4, C_2H_4

[iv]   A gas can be collected by the method shown in the fig .Why this gas is collected by this method Name the gas

[2+1+1+1]

16   [i] What is aperture and the power of lens? Focal length of concave lens is 25cm find its power?
     [ii]Refractive index of Diamond is 2.42.What is meant by this?
     [iii]Draw the image by concave lens   when object is at (a) infinity (b) between f and 2f

[2+1+2]

Or

[i]   An object of size 4 cm is placed at a distance of 20cm from the pole of a concave mirror of radius of curvature 30cm. Calculate the distance and size of the image so formed. What will be the   nature   of image?

[ii]   Why does the sky appear dark instead of blue to an astronaut?

[iii]   Draw label diagram of an eye, write the causes of myopia and show how it can be prevented with ray diagram
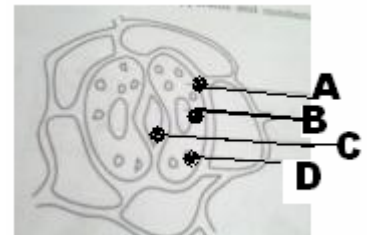
[iv]The far point of a myopic person is 100cm in front of the eye. What is the nature and power of the lens required to correct the problem

[1+1+2+1]

Section B

17   Expand CFC, IUCD, OC, CNG   1

18.   Define hormone. What is the function of plant hormone cytokinin   1

19.   Define blood pressure? What is the range of B P of a healthy man?   1

20   Draw label diagram of solar cooker. Can a polythene sheet be used instead of thick glass , why?

                                                                                    2

21   .What contribution forest officer Sh,. A.K. Banerjee made in protection of environment?   2.

22.   How does Mandel's experiment show that traits are inherited independently?   2

23   What is meant by vegetative propagation? Describe its various ways.   2

24.   Write the names of source gland and functions of the following hormones

        (i) Adrenaline (ii) Thyroxin   2.

25.   What are the various evidences in favour of evolution?   3

26   [i] If we chew a wheat grains for a long time it tastes sweet why?

        [ii] Name the finger like projections present on the inner lining of intestine and state their function.

        [iii] What is meant by systole and diastole?   1+1+1

27   ..[i] What is meant by pollination? Name its various types of pollination agents?

        (ii)Labeled the diagram given, and explain how exchange of gases occurs

in leaf of a plant.

        (iii)Draw cross- section of human heart; label it **arrow** path of circulation by
arrows only.

                                                       [1+2+2]

Or

[i]What are the different methods of contraception?

[ii] What is regeneration; explain with the help of suitable example?

[iii]Describe the process of fertilization in a flowering plants?   [1 ½ +1 ½ +2]