



Hajare Foundation's
PADMAVATI INTERNATIONAL SCHOOL, HOSUR-RABKAVI

PT-I, 2020

Sub: Science

Date: 28/10/2020

Marks: 80

Class: X

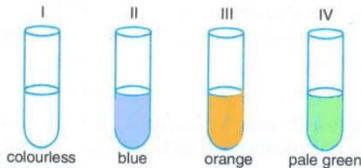
Time: 3hrs

Instructions

1. Question paper comprises 4 sections. A B C D. There are over all 30 questions. All questions are compulsory
2. Section A question number 1 to 12 are objective type questions of one mark each.
3. Section B question from 13 to 22 are short answer type questions, carrying 3marks.
4. Section c question from 23 & 24 are short answer type questions, carrying 4marks.
5. Section D question from 25 to 30 are long answer type questions, carrying 5 marks.

Section A

1. What type of reaction is an exothermic reaction? **[1]**
 - a) Decomposition reaction
 - b) Displacement reactions
 - c) Combustion reaction
 - d) Redox reaction
2. A student took four test tubes containing solution of different colours marked I, II, III and IV as shown below. The test tubes, containing copper sulphate solution and ferrous sulphate solution, could be the tubes: **[1]**



colourless blue orange pale green

 - a) II and III
 - b) I and III
 - c) III and IV
 - d) II and IV
3. Which of the following is the most reactive halogen? **[1]**
 - a) F
 - b) I
 - c) Br
 - d) Cl
4. Which of the following is an example of Dobereiner's triad? **[1]**
 - A. Li, Na, K
 - B. Cl, Br, I
 - C. Na, Mg, Al
 - D. F, I, Br
 - a) A and B
 - b) All of these
 - c) A and C
 - d) C and D
5. Oxygen liberated during photosynthesis comes from **[1]**
 - a) Carbon dioxide
 - b) Water
 - c) Glucose
 - d) Chlorophyll
6. Choose the forms in which most plants absorb nitrogen **[1]**
 - i. Proteins
 - ii. Nitrates and Nitrites
 - iii. Urea

a) (i) and (ii)

b) (iii) and (iv)

c) (i) and (iv)

d) (ii) and (iii)

- Section B

- 2 / 4

[Atomic mass of Be = 9, Na = 23, Mg = 24, Si = 28, Cl = 35 and Ca = 40]

Explain by giving reason.

16. An atom has electronic configuration 2, 8, 7. What is the atomic number of this element? [3]
17. How do leaves of plants help in excretion? [3]
18. What is the role of Hydrochloric acid in our stomach? [3]
19. What are the changes seen in girls at the time of puberty? [3]
20. What is meant by pollination? Name and differentiate between the two modes of pollination in flowering plants. [3]
21. i. 'Males are heterogametic'. Why? [3]
ii. Differentiate between inherited and acquired characters by giving two points.
22. Two plants, A with white flowers and B with red flowers were crossed. The F_1 progeny shows all red flowers and F_2 has three red and one white. Categorise the trait as dominant and recessive. [3]

Section C

23. State True or False: [4]
 - a) The formula of Phosphorous pentachloride is PCl_3 .
 - b) In a group, the atomic radius decreases from left to right.
 - c) The rate of breathing in aquatic animals is faster than others.
 - d) Vas deferens is not a part of the female reproductive system in human beings.
24. Fill in the blanks: [4]
 - a) Rusting of iron occurs due to _____.
 - b) Moving in a group from top to bottom, the atomic radius _____.
 - c) The other name of Fallopian tube is _____.
 - d) Gene is the part of a _____ which controls the appearance of a set of hereditary characteristics.

Section D

25. There are different types of chemical reactions occurring around us or being carried out for the benefit of mankind, e.g. combination reactions, decomposition reactions, displacement reactions, precipitation reactions, reduction-oxidation (redox) reactions, photochemical reactions etc. [5]
Now answer the following questions:
 - i. Combustion of coke is a combination reaction. CO_2 is not a pollutant. Then why is combustion of coke harmful?
 - ii. Which reaction followed by two combination reactions are involved in white wash of walls?
 - iii. Give one use of tin plating in daily life.
 - iv. How photochemical reactions have played an important role in photography?
26. Give an account of the process adopted by Mendeleev for the classification of elements. How did he arrive at "periodic law"? [5]
27. What is nutrition? Briefly explain the two major kinds of nutrition. [5]
28. With the help of a well labelled diagram explain the structure of human excretory system. [5]

29. Write the functions of placenta. [5]
30. How do Mendel's experiments show that gene may be dominant or recessive? [5]