SUMMATIVE ASSESSMENT - I - 2021 - 22

GENERAL SCIENCE - Paper - I

Physical Science

(English Medium)

Class : X] (Max. Marks : 50) [Time : 3.15 Mnts.

Academic standard	AS_1	AS_2	AS_3	AS_4	AS_5	AS_6	Total	Grade
Q. No.s	1,2,3,5,6,7,8,9,10, 12,15,16,17, 18,20,28,29,30	19,21,27	24,26, 30	4,11, 25,32	14,33	13,22,23	33	
Allotted Marks	20	5	8	7	5	5	50	
Total								

Name of the Student : ..... Roll No.: .....

Instructions :

1. There are four sections and 33 questions in the paper.
2. Answer should be written in a given answer sheets.
3. There is internal choice in section - IV.
4. Write all the question visible & legibly.
5. 15 minutes are given for reading question paper and 2.30 hours given for answering questions.

SECTION - I

Note : 1. Answer all the questions.
2. Each question carries ½ mark. 12 x ½ = 6

1. Which phenomenon is involved in the formation of fog ?
2. The colour of phenophthalein indicator in basic solution is .
   A) Yellow B) Green C) Pink D) Orange
3. What type of reaction takes place in stomach when an antacid tablet is consumed ?
4. Match the following.

Section - A	Section - B
A) Formula for refractive index	P) V/C
B) Possible values of refractive index	Q) C/V
	R) > 1
	S) < 1

5. The lens which can form real and virtual image is _____

6. "The lowest energy orbitals are filled first" - who proposed this rule.

7. The maximum number of electrons that can be accommodated in the M-shell of an atom is

   A) 2 B) 8 C) 18 D) 32

8. Give an example of Dobereiner's traid.

9. Which of the following is the most active metal ?

   A) Lithium B) Sodium C) Potassium D) Rubidium

10. What is the value of latent heat of fusion of ice ?

11. P : Light ray passing along the principal axis is undeviated.

    Q : Light ray passing through the focus is undeviated.

    Which of the following is correct ?

    A) Both P, Q are correct B) Both P, Q are incorrect

    C) P is correct, Q is incorrect D) P is incorrect, Q is correct

12. At Critical angle of incidence, the angle of refraction is _____

SECTION - II

Note : 1. Answer all the questions.

2. Each question carries 1 mark. **8 x 1 = 8**

13. Convert $27^{o}C$ into Kelvin scale.

14. Draw the shape of s-orbital.

15. On what factors does the refractive index of medium depend ?

16. What is the range of P^{H} scale ?

17. Which group elements are called halogens ?

18. What is principal axis of lens ?

19. Why pure acetic acid does not turn blue litmus to red ?

20. What is humidity ?

SECTION - III

Note : 1. Answer all the quetsions.

2. Each question carries 2 marks. **8 x 2 = 16**

21. Plaster of paris should be stored in moisture-proof container. Explain Why ?

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22. What role does specific heat play in keeping a watermelon cool for a long time after removing it from a fidge ?
23. Give two important uses of washing soda.
24. What happens to the water when wet clothes dry ?
25. The differentiating electron in an atom has following set of quantum numbers are given below, then answer the given questions.

n	l	m_l	m_s
3	0	0	$+\frac{1}{2}$

a) Which orbital this electron belongs ?

b) Write the name of the element.

26. How does atomic radius change in a group and period ?
27. Why is it difficult to shoot a fish swimming in water ?
28. Write the lens maker's formula and explain the terms in it.

SECTION - IV

Note : 1. Answer all the quetsions.

2. Each question carries 4 marks. **5 x 4 = 20**

29. a) Write the differences between evaporation and boiling.

(Or)

b) Explain the formation of mirage.

30. a) Define the modern perodic law. Discuss the construction of the long form of the periodic table.

(Or)

b) Explain the significance of three quantum numbers in predicting the position of an electron in an atom.

31. a) How do you verify experimentally that sin i/sin r is a constant.

(Or)

b) You have a lens. Suggest an experiment to find out the focal length of the lens.

32. a) Observe the table and answer the following questions.

Element	Electronic configuration
A	$1s^2 2s^2$
B	$1s^2 2s^2 2p^6 3s^2$
C	$1s^2 2s^2 2p^6 3s^2 3p^3$
D	$1s^2 2s^2 2p^6$

a) Which are the elements coming within the period ?

b) Which are the elements coming within the same group ?

c) Which are the noble gas element ?

d) To which group and period does the element 'C' belong ?

(Or)

b) The Electronic configuration of an element is $1S^2\ 2S^2\ 2P^6\ 3S^2\ 3P^5$

Answer the following questions.

a) What is name of the element ?

b) How many electrons are present in L - shell ?

c) What is the $(n + l)$ value of 3p orbital ?

d) In which orbital the next electron enters ?

33. a) Draw ray diagram of convex lens for the following positions and explain the nature and position of image.

i) Object is placed at F_2

ii) Object is placed beyond $2F_2$

(Or)

b) Draw a neat diagram showing acid solution in water conducts electricity.