

MODEL PAPER-5
S.S.C. PUBLIC EXAMINATIONS-2021
PHYSICAL SCIENCE
(English Medium)

Class: X

(Max.Marks: 50)

Time: 2 Hr. 45 Min

Instructions:

1. There are four sections an 33 questions in this papers.
2. Answer should be written in a given answer booklet
3. There is internal choice in Section-IV
4. Write all the questions visible and legibly.
5. 15 Minutes are given for reading the questions paper and 2.30 hours for given for answering questions.

SECTION-1

NOTE:1. Answer all the questions/

2. Each question carries 1/2 mark

12 x 1/2 = 6 M

1. The average kinetic energy of the molecules in the substance is directly proportional to
 - a) absolute temperature
 - b) Room temperature
 - c) Mass of the substance
 - d) internal energy
2. Which of the following is Olfactory indicator
 - a) Vanilla
 - b) Clove-Oil
 - c) Onion
 - d) All
3. The refractive index of glass is 3/2. Then the speed of light in glass.....
4. Choose the correct statement from the following
 - a) Concave lens always forms virtual images.
 - b) Power of lens is measured in meter
 - c) Lens formula is $\frac{1}{f} = (n-1) \left[\frac{1}{R_1} - \frac{1}{R_2} \right]$
 - d) Lens makers formula = $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$
5. The angle of vision of human beings is about
 - a) 45°
 - b) 60°
 - c) 90°
 - d) 120°
6. What is the maximum value of l for $n = 4$
 - a) 2
 - b) 1
 - c) 3
 - d) 0
7. Match the following

	Block		Element
1.	S-Block	[]	a) Thorium
2.	P-Block	[]	b) Copper
3.	d-Block	[]	c) Lithium
4.	f- block	[]	d) Silicon
	A) 1-a 2-b 3-c 4-d		B) 1-c 2d, 3-b , 4 -a
	C) 1-b, 2-a, 3-d 4-c		D) 1-d, 2-c,3-b, 4-a

8. Who proposed electronic theory of valence.
9. Electric resistance depends on
10. The magnetic force on a current carrying wire placed in uniform magnetic field if wire is oriented perpendicular to magnetic field is
a) 0 b) ILB c) $2ILB$ d) $ILB / 2 \theta$
11. Write the formula of any one of the iron ores
12. Which of the following is not an alkane
 CH_4 , C_3H_8 , C_2H_4 , C_5H_{12}

SECTION-II

NOTE: 1. Answer all the questions 8x1=8M
 2. Each question carries 1 Mark

13. Convert 30C into Kelvin scale
14. Define absolute refractive index
15. Define power of Lens
16. The atomic number of an element is 35 where would you expect the position of this element in the periodic table?
17. Why do elements form Chemical bond
18. What is value of 1 KWH in joules?
19. Define magnetic flux density.
20. Name the compound $H - C - \overset{\overset{H}{|}}{C} = \overset{\overset{H}{|}}{C} - H$ _

SECTION-III

NOTE: 1. Answer all the questions 8x2=16M
 2. Each question carries 2 Marks

21. Why is water used as coolant in automobiles
22. What is neutralization? Give one example
23. A double convex lens of equal radi of curvature
R and refractive index of material is 1.5 what is focal length
24. Doctor advised to use 2D lens What is its focal length
25. What is absorption spectrum
26. Draw the shape of (a) NH_3 b) H_2O
27. What happened to the resistance as the conductor is made thinner.

28. What is isomerism? Explain with an example

SECTION-IV

NOTE: 1. Answer all the questions

5x4=20M

2. Each question carries 4 Marks

29. a) Write the applications of specific heat capacity

(OR)

c) List out the material required for the oversted experiment for electromagnetism. Write the procedure of the experiment.

30. a) Rainbow is an example for continuous spectrum – explain

(OR)

b) Discuss the construction of the long form of the periodic table.

31. a) How do you verify experimentally that $\frac{\sin i}{\sin r}$ is a constant

(or)

b) State ohm's law suggest an experiment to verify it an explain the procedure.

32. a) A, B and C are three elements with atomic number 6,11 and 17
Respectively

i) Which of these cannot form ionic bond? Why

ii) Which of these cannot form covalent bond? Why

(OR)

b)

Organic compound	Ethane	Butane	Ethene	Butene	Hexyne	Heptyne
Formula	C ₂ H ₆	C ₄ H ₁₀	C ₂ H ₄	C ₄ H ₈	C ₆ H ₁₀	C ₇ H ₁₂

Observe the above table and answer the following questions.

1. Write the general formula of Alkanes

2. Mention the names of unsaturated hydrocarbons

3. Write the homologous series of Alkynes

4. Write the formula of Alkynes

33. Draw the ray diagrams to find the images when an object is placed in front of the Lens (i) at a distance of 8 cm (ii) at a distance of 10cm on the principle axis of a convex lens whose focal length is 4 cm Write the charactestic of images in both the case.

Or

b. Draw neat diagrams of S and P Orbitals