## S.S.C. PUBLIC EXAMINATIONS MODEL PAPER\_II physical sciences

#### CLASS : X (E.M) PARTS A &B

#### TIME : 2h 45Min. MAX. MARKS: 40

#### Instructions:

Time: 2 Hrs

- 1. Read the whole question paper and understand every question thoroughly without writing anything and 15 minutes of time is allotted for this.
- 2. Answer the questions under Part A on a separate answer book.
- 3. Write the answers to the questions under **Part B** on the question paper itself and attach it to the answer book of **Part A**
- 4. Answer all questions from the given three Sections I, II, and III of Part A
- 5. In section III, every question has internal choice, answer any one.

# Part – A

Marks: 35

7 X 1 = 7

### **SECTION – I**

#### Note:

- 1. Answer ALL questions.
- 2. Each question carries **ONE** mark
- *3.* Write answers in 1 2 sentences.
- 1. Write any two differences between concave and convex mirrors
- 2. Balance the equation:  $NH_3 + Cl_2 \rightarrow NH_2 + NH_4Cl$
- 3. Where do we use bleaching powder in our daily life?
- 4. Show the position of image and complete the adjacent ray diagram.
- 5. Write the four quantum numbers of  $4p^1$
- 6. Which element has highest electro negativity among F, Cl, Br, I, At
- 7. What is minimum resistance that we can get form the combination of  $15\Omega$  and  $30\Omega$ ?

$$SECTION - II \qquad 6 X 2 = 12$$

Note:

- 1. Answer ALL questions.
- 2. Each question carries **TWO** marks
- 3. Write answers in 4-5 sentences.
- 8. Explain why Sun appears red during Sunset?
- 9.

Material	Silver	Nickel	Glass	Tungsten
Specific Resistance	1.59 x 10 <sup>-8</sup>	6.99 x 10 <sup>-8</sup>	$10.0 \times 10^{10}$	5.60 x 10 <sup>-8</sup>
(Ω-m)				

i) Which of the above substance is a good conductor?

ii) Which of the above substance is an insulator?

10. How do you justify that the element Mg belongs to  $3^{rd}$  Period and  $2^{nd}$  Group.



11.Write the structures of the following :

i) 2 – Methyl – Pentane – 2 – Ole

ii) 3,4 -Di - chloro - But - 1 - ene

12. Give any four daily life applications of electromagnetic induction.

13. Write the list of material and chemicals required to do esterification reaction

## Note:

- 1. Answer ALL questions
- 2. Each question carries FOUR marks
- 3. There is internal choice for each question, only one option from each question is to be attempted.
- 4. Write answers in 8-10 sentences.
- 14. A student (A) wrote the electronic configuration of an element as

 $1s^22s^22p^63s^23p^64s^24p^2$ . This was corrected by another student (B).

- i) Which principle is basis for the correction of this electronic configuration by student B
- ii) Write the correct electronic configuration
- iii) What is the name of that element?
- iv) Write the n and l values of the valency orbital of that element.

## (**OR**)

Explain with reasons that how the following properties will change in groups And periods: i) Atomic size ii) Ionization energy

15. Write the list of apparatus required and the experimental procedure to find the refractive index of a prism.

## (OR)

A student told that the focal length of a lens does not depend on nearer medium, but another student proved that the above statement is wrong by conducting an experiment. Write the procedure of that experiment.

16. Draw the diagrams showing the myopia and its correction.

### (**OR**)

Draw the ray diagrams to show the formation of image by concave mirror as described below:

i) Real and magnified image

- ii) Size of image is equal to the size of the object.
- 17. The effective resistance of two resistors  $R_1$  and  $R_2$  when connected in series is  $30\Omega$  and in parallel is 7.2 $\Omega$ . Find the values of  $R_1$  and  $R_2$ .

## (OR)

Explain the role of quantum numbers in estimating the location of a particular electron in an atom.

# PART – B

Attach Part – B question paper to the main answer book of Part – A Time : 30 Minutes Marks : 5

# Instructions:

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	I. Answer ALL questions		
	2. Each question carries <sup>1</sup> / <sub>2</sub> mark	CS .	
	3. Answers are to be written in th	he question paper only	
	4. Marks will not be awarded in	case of any overwriting, rewriting or	•
	erased answers.		
	5. Write CAPITAL LETTERS sh	howing the correct answer for the	
	following questions in the bra	ckets provided against each question	
1.	Which of the following explains t	he straight line motion of light (	)
	A) Law of reflection	B) Lens rule	
	C) Fermat's Principle	D) Snell's law	
2.	Air bubble on water acts as a	_lens (	)
	A) Convergent B) Plano co	oncave C) Divergent D) Plano conv	ex
3.	The phenomenon involved in the	shining of diamond is (	)
	A) Total internal reflection	B) Dispersion	
	C) Refraction	D) Reflection	
4.	The <i>l</i> value of differentiating elec	tron in $1s^2 2s^2 2p^1$ is (	)
	A) 1 B) 2 C) 3	D) 4	
5.	Which of the following pair can f	orm ionic bond (	)
	A) $C, H$ B) $N, H$	C) <i>Na</i> , <i>Cl</i> D) <i>O</i> , <i>H</i>	,
6.	Application of electromagnetic in	duction is (	)
	A) Fan B) Electric moto	r C) Bulb D) Induction stove	,
7.	The test used to identify the gas e	volved when Zn reacts with Hcl (	)
	A) Lime water turns into mi	lky white	,
	B) Contains the smell of rot	ten egg	
	C) Burning match stick will	be put off with 'pop' sound	
	D) Burning match stick glov	ws brightly.	
8.	Which of the following is an alco	hol (	)
	A) $C_2H_5CHO$ B) $C_2H_5CO$	$OCH_3 C) CH_3COOH D) C_2H_5OH$	
9.	The ammeter reading in the adjac	ent figure is $15\Omega$	
	A) 0.2A B) 2A C) 5A	D) 45A	
10.	The best process used to remove a	gongue from	A
	sulphide ore is	( )	
	A) Washing with water	B) Hand picking	
	C) Floatation	D) Magnetic separation	