

**BOARD OF SECONDARY EDUCATION (TELANGANA)**  
**SUMMATIVE ASSESSMENT – II**  
**TENTH CLASS GENERAL SCIENCE**  
**PHYSICAL SCIENCE MODEL PAPER**  
**PAPER – I (ENGLISH VERSION)**

Time: 2 hrs. 45 mins.

PART – A & B

Maximum Marks: 40

**INSTRUCTIONS:**

- i) In the time duration of 2 hrs. 45 mins. 15 minutes of time is allotted to read and understand the question paper.
- ii) Answer the questions under PART – A in separate answer book.
- iii) Write the answers to the questions under PART – B on the question paper itself and attach it to the answer book of PART – A.

Time: 2 hrs. 15 mins.

PART – A

Marks: 35

**INSTRUCTIONS:**

- i) PART – A comprises of three Sections I, II, III.
- ii) All the questions are compulsory.
- iii) There is no overall choice. However, there is an internal choice to the questions under Section – III.

**SECTION – I**

**INSTRUCTIONS:**

- i) Answer ALL the questions.
  - ii) Each question carries ONE Mark.
  - iii) Write the answers in 1 – 2 sentences.  $7 \times 1 = 7$
1. What is the use of magnetic field lines?
  2. How do you appreciate the role of ethanol as a fuel in our daily life?
  3. Why dough rises, swells, when it is treated with yeast?
  4. Why is the second ionization energy more than the first ionization energy for any element?
  5. On which principle a generator works?
  6. Why the soil of agricultural lands get tested for pH?
  7. Draw the diagram of a lens which will be recommended by an eye doctor for a long sighted patient.

SECTION - II

INSTRUCTIONS:

- i) Answer ALL the questions.
  - ii) Each question carries TWO Mark.
  - iii) Answer the questions in 4 – 5 sentences.  $6 \times 2 = 12$
8. Why Mendeleev had to have certain gaps in his periodic table.
9. A prism of angle  $A = 60^\circ$  produces an angle of minimum deviation  $D = 30^\circ$ . Find the refractive index of the material of the prism.
10. Why does the sky appear white sometimes?
11. Predict what happens in the field of domestic use of metals if alloys were not discovered.
12. How can we test the pH value of the soil.
13. a) Why are vegetable oils healthy as compared to vegetable ghee?  
b)  $\text{CH}_3 - \underset{\substack{| \\ \text{Cl}}}{\text{CH}} - \text{CH} = \text{CH}_2$  has the IUPAC name .

SECTION - III

INSTRUCTIONS:

- i) Answer ALL the questions.
  - ii) Each question carries FOUR Marks.
  - iii) There is Internal Choice for each question only one option from each question is to be attempted.
  - iv) Answer the questions in 8 – 10 sentences.  $4 \times 4 = 16$
14. a)  $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) + \text{Heat} \longrightarrow 2 \text{NO}(\text{g})$   
What information do you get from the above equation? Comment.
- b) Write an activity about how you conduct an experiment to show that more reactive metals replace less reactive metals from their compounds.

(OR)

In an atom the number of electrons in N – Shell is equal to the number of electrons in K, L, M shells. Answer the following questions.

- a) Which is the outermost shell?
  - b) How many electrons are there in its outermost shell?
  - c) What is the atomic number?
  - d) Write the electronic configuration of the element.
15. Write atleast 8 various applications of Faraday's law of electro magnetic induction in daily life.

(OR)

What are the factors affecting the resistance of an electric conductor? Explain any two factors.

16. Explain the formation of Nitrogen Molecule.

(OR)

You are given two acids. How can you test them to know which is strong acid and which is weak acid?

17. What are the materials required to prove that the focal length of the lens depend upon surrounding medium? Write the procedure.

(OR)

How do you appreciate the role of iris, lens, retina and ciliary muscles in visualising the colourful world to us?

## INSTRUCTIONS:

- i) Answer ALL the questions.  
 ii) Each question carries  $\frac{1}{2}$  Mark.  
 iii) Answers are to be written in question paper only.  
 iv) Marks will not be awarded in any case of any over writing and rewriting or erased answers.  
 v) Write the CAPITAL LETTER (A, B, C, D) showing the correct answer for the following questions in the brackets provided against them.

$$10 \times \frac{1}{2} = 5$$

18. Find the odd one among the following.




- A)  $E = h\nu$                       B)  $h = \frac{E}{\nu}$                       C)  $\nu = \frac{E}{h}$                       D)  $\nu = Eh$

19. Match the following.

- 1) Pyrolusite                      X) Ca  
 2) Gypsum                      Y) Mg  
 3) Cornallite                      Z) Mn

- A) 1-Z, 2-Y, 3-X                      B) 1-Y, 2-Z, 3-X  
 C) 1-Z, 2-X, 3-Y                      D) 1-X, 2-Y, 3-Z

20. Symbol of resistance .....

- A)                       B)                       C)                       D) (.)

21. If  $l = 2$ , number of values for  $m_l$  is .....

- A) 7                      B) 5                      C) 3                      D) 1

22. Which one is not an application of electromagnetic induction?

- A) A.T.M. Card                      B) Tape Recorder  
 C) Calling Bell                      D) Induction Stove

23. If 'C' is the velocity of light in Vacuum and 'V' is its velocity in a medium, then the refractive index (n) of the medium is .....

- A) CV                      B) C + V                      C)  $\frac{C}{V}$                       D)  $\frac{V}{C}$

24. If 2D is the power of a lens, then its focal length is .....

- A) 100 cm                      B) 50 cm  
 C) 200 cm                      D) 25 cm

25. Which of the following is not a hydrocarbon?

- A)  $R - CH_3$                       B)  $RCH = CH_3$   
 C)  $RCH_3OH$                       D)  $CH_3CH = CH_2$

