

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:

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.

Time: 2 hrs.

PART – A

Marks: 35

Note: i) PART – A comprises of three Sections I, II and III.

ii) All the questions are compulsory.

iii) There is no overall choice. However there is internal choice to 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. The value of magnetic field induction which uniform is 2T. What is the flux passing through a surface of area 2.0 m^2 perpendicular to the field?
2. What is nature and type of image is obtained on retina in human eye?
3. Write the structure of 5, 6 – di chloro oct – 6, 7 – di en – 1, 2 – di ol.
4. Which of the block in a periodic table have non – metals, metals and metalloids.
5. Draw a ray diagram shows a point sized image with convex lens.
6. Draw the figure of BeCl_2 molecule which has linear structure and identify the bond angle.
7. What are the Alloys used as heating element in electrical iron box, toasters?

SECTION – II

INSTRUCTIONS:

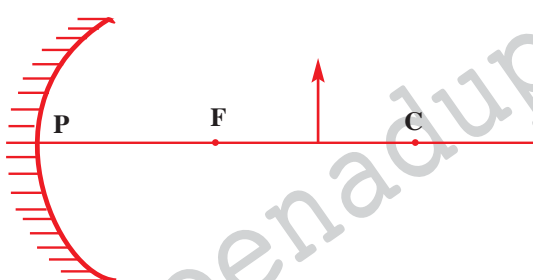
i) Answer ALL the questions.

ii) Each question carries TWO Marks.

iii) Answer the questions in 4 – 5 sentences.

6 × 2 = 12

8. Predict what would have happens if there was no current electricity?
9. Imagine, what happens if electron transfer is not possible in between of atoms.
10. What are the precautions we have to take while performing Experiment in finding the refractive index of prism?
11. Explain Paulis exclusion principle by constructing a table for Lithium element.

12.  Complete the ray diagram and describe the nature of the image formed.

13. Explain the role of pH in our digestive system.

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 each question in 8 – 10 sentences.

4 × 4 = 16

14. Mention and Explain the factors of influencing Ionization energy.

(OR)

Write the balanced chemical equation for the following reactions.

i) Calcium hydroxide + Carbondioxide \longrightarrow Calcium carbonate + Water

ii) Zinc + Sodium Hydroxide \longrightarrow Sodium Zincate + Hydrogen

iii) Magnesium + Hydrochloric acid \longrightarrow Magnesium chloride + Hydrogen

iv) Sodium hydroxide + Sulphuric acid \longrightarrow Sodium sulphate + Water

15. There is an object in front of convex mirror at a distance of 5 cm. If its focal length is 10 cm then

a) What is the image distance?

b) What is its magnification?

(OR)

State Junction law, Loop law and explain each law with one suitable example.

16. How do you verify experimentally that, the focal length of a convex lens is increased when it is kept in water?

(OR)

Write down the process and materials used in the experiment of the reaction of carbonates and metal hydrogen carbonates with acids produces corresponding salts, carbon dioxide, gas and water.

17. Complete the following table and answer the questions given below.

Ore	Bauxite	Copper Iron pyrites	Zincblende	Epsom salt	Horn Silver	
Formula	$Al_2O_3 \cdot 2H_2O$	$CuFeS_2$		$MgSO_4 \cdot 7H_2O$	$AgCl$	$KCl \cdot MgCl_2 \cdot 6H_2O$
Metal	Al		Zn	Mg		Mg

- How many water are molecules are there in Epsom salt?
- Which metals Ore is Bauxite?
- Among the above metals which are available in free state?
- What is the ore of iron metal?

(OR)

Complete the table given with the Hydrocarbons

C_2H_2 , CH_4 , C_2H_4 , C_2H_6 , C_3H_8 , C_3H_6 , C_3H_4 , C_4H_6 , C_4H_8 , C_4H_{10} , C_5H_{10} , C_5H_{12} , C_5H_8

and answer the questions given below.

Alkanes	Alkenes	Alkynes

- Which among the above are saturated Hydrocarbons?
- Write the general formula of Alkenes.
- What is the formula of Butane?
- Draw the structure of Ethene (C_2H_4)

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 overwriting, 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. $10 \times \frac{1}{2} = 5$

1. If we touch a 240 V current wire, then the electric current passes through our body is ()
 A) 0.001 A B) 0.015 A C) 0.024 A D) 0.0024 A
2. Five 60 W bulbs are working for 8 hours per a day. If the charge to be paid per unit is 80 paise. The amount to be paid for a month of 30 days is ()
 A) Rs.72.00 B) Rs.50.60 C) Rs.57.00 D) Rs.57.60
3. Where should an object be placed from a converging lens of focal length 10 cm. So as to obtain a virtual image of magnification 2 is ()
 A) 5 cm B) 10 cm C) 15 cm D) 12.5 cm
4. What type of optical instrument will you use for reading a page in small print ()
 A) Bi concave lens B) Bi convex lens
 C) Plano – concave lens D) Concave – convex lens
5. The number of electrons present in an orbit is ()
 A) $1n^2$ B) $2n^2$ C) $3n^2$ D) $4n^2$
6. The IUPAC Name of the compound $\text{CH}_3 - \underset{\text{CH}_3}{\text{CH}} - \underset{\text{OH}}{\text{CH}} - \text{CH}_3$ ()
 A) 2 – methyl 3 – butanal B) 3 – methyl 2 – butanal
 C) 2 – methyl 2 – butanal D) 3 – methyl 3 – butanal
7. In the equation $\text{CH}_4 + 2 \text{O}_2 \longrightarrow \text{CO}_2 + 2 \text{H}_2\text{O}$ the amount of oxygen needed to burn 4 grams of methane completely is ()
 A) 4 gram B) 8 gram C) 16 gram D) 32 gram
8. Match the following. ()
- | | |
|----------------------------------|----------------------------|
| 1) H_2O molecule | a) Planer triangular shape |
| 2) BeCl_2 molecule | b) Pyramidal shape |
| 3) BF_3 molecule | c) V – shape |
| 4) NH_3 molecule | d) Linear |
- A) 1–c, 2–d, 3–b, 4–a B) 1–d, 2–c, 3–b, 4–a
 C) 1–c, 2–d, 3–a, 4–b D) 1–c, 2–b, 3–d, 4–a

9. Stinging of Honeybee causes pain due to releasing of ()
A) Methanoic Acid B) Tartaric Acid
C) Citric Acid D) Hydrochloric Acid
10. The unit of electrical energy consumed is ()
A) Volt B) Ampere
C) Watt D) Kilo watt hour

ANSWERS

1-D; 2-D; 3-A; 4-B; 5-B; 6-B; 7-C; 8-C; 9-A; 10-D.

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