

SLIP TEST - 1
PHYSICAL SCIENCES

UNIT-1 : HEAT

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. SI units of Heat is
2. Absolute zero temperature (Infinite cold) is
3. What would be the final temperature of a mixture of 60 g of water at 40°C temperature and 60g of water at 80°C temperature ?
4. SI units of specific heat

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. Convert 300K into °C.
6. Why do the food colour grains in hot water move more rapidly than the grains in cold water.
7. Write the formula for specific heat S.

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. Write the differences between temperature and Heat ?
9. What role does specific heat capacity play in a watermelon to keep it cool for long time after removing it from a fridge on hot day.

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Express the procedure of finding specific heat of solid / lead shots experimentally.

(Or)

11. Which of the following substance take more time to raise its temperature for a certain degree celsius given reason.

Substance	Specific Heat	Substance	Specific Heat
	in cal/gm-°C		in cal/gm°C
Kerosene oil	0-50	Water	1
		Sea water	0.95

SLIP TEST - 2
PHYSICAL SCIENCES
UNIT-2: ACIDS, BASES AND SALTS

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. Which gas evolves when acids react with metals ?
2. What is the colour of phenolphthalein solution when it reacts with Bases ?
3. Which is used to measure the concentration of Hydrogen ions ?
4. Who invented pH scale ?

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. What are olfactory indicators ? Give an example ?
6. What happens if the pH value of gastric juice in our body increases ?
7. Why does not distilled water conduct electricity ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. What is neutralization reaction ? Give an example ?
9. What is the importance of pH of the soil ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Compounds such as alcohols and glucose contain hydrogen but are not categorized as acids. Describe an activity to prove it.

(Or)

Draw the neat diagram of experiment metal carbonates react with acids.

SLIP TEST - 3

PHYSICAL SCIENCES

REFRACTION OF LIGHT AT PLANES SURFACES

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

4 × 1/2 = 2M

1. Which of the following is Snell's Law.

A) $n_1 \sin i = \frac{\sin r}{n_2}$ B) $\frac{n_1}{n_2} = \frac{\sin r}{\sin i}$ C) $\frac{n_2}{n_1} = \frac{\sin r}{\sin i}$ D) $n_2 \sin i = \text{constant}$

2. Refractive Index value of Diamond.

A) 2.45 B) 2.44 C) 2.42 D) 2.43

3. What is the speed of light in vaccum ?

4. Refractive Index of medium does not depend upon

II. Answer the following questions in one sentence.

3 × 1 = 3M

5. Refractive Index of glass Relative to water is 9/8, what is the Refractive Index of water Relative to glass ?

6. What are the factors that influence the Refractive Index ?

7. Observe the following table.

Medium	water	Crown glass
Refractive Index	1.33	1.52

i) Which is the denser medium water (or) crown glass ?

III. Answer the following questions in two to four sentences.

2 × 2 = 4M

8. When we sit at a campfire, objects beyond the fire is seen swaying. Give the reason for it ?

9. How light ray moves when it enters from Rarer medium to denser medium and denser medium to Rarer medium draw the ray diagram.

IV. Answer the following questions in 4 to 8 sentences.

1 × 4 = 4M

10. Conduct on Experiment which proves $\frac{\sin i}{\sin r}$ is a constant.

SLIP TEST - 4

PHYSICAL SCIENCES

REFRACTION OF LIGHT AT PLANES SURFACES

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. If the Refractive Index of glass is $\frac{3}{2}$, Then what is the speed of light in glass.
2. The velocity of the light in an 'X' medium is 2×10^8 m/sec. And velocity of light in Air is 3×10^8 m/s then find the Refractive Index of medium X
3. The process of changing the speed at an interface when a light travel from one medium to another resulting in a change in direction is
4. Assertion : Refractive Index of Kerosine is greater than water
Reason : The velocity of light in water is greater than in kerosine.
A) Both Assertion, Reason correct
B) Both Assertion, Reason are not correct.
C) Assertion is correct, Reason is correct explanation.
D) Assertion is correct but Reason is not correct explanation

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. Why is it difficult to shoot a fish swimming in water ?
6. The speed of the light in a diamond is 1,24,000 km/s. Find the Refractive Index of diamond if the speed of light in air is 3,00,000 K/S.
7. Why do stars appear Twinkling ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. Define Refraction and give some examples of Refraction in our daily life ?
9. Write down the laws of Refraction ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Refractive index of some material media is given in the table.

Material	Coconut	Crown	Diamond	Hydrogen	Water	Flint
Medium	oil	Glass		gas		glass
Refractive Index	1.445	1.52	2.42	1.000132	1.33	1.65

- i) Which is optically denser than Flint glass ?
- ii) Which is optically Rarer than water ?
- iii) In which material does the speed of light travel faster than in coconut oil ?
- iv) In which material the speed of light is less than that of crown glass ?

SLIP TEST - 5

PHYSICAL SCIENCES

REFRACTION OF LIGHT AT CURVED SURFACES

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

- X : The focal value of any lens is twice the diameter of its curvature.
Y : The Radius of curvature of any lens is twice the value of the focal length.
A) Both X, Y are correct
B) Both X, Y are incorrect
C) X is correct, Y is incorrect
D) X is incorrect, Y is correct
- The value of the focal length of the lens is equal to the value of the image distance when the rays are
A) Passing through the optic centre
B) Parallel to the principle axis
C) Passing through the focus
D) In all the cases
- What happens to the image formed by a convex lens, if its half part is black end ?
A) The image is half
B) Formed the upper half image
C) Image Brightness decreases
D) There will be no impact
- When an object is placed, you will get an image of the same size as that of object.
A) At focus
B) At centre of curvature
C) Between centre of curvature and Focus
D) Beyond centre of curvature

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

- On what factors does the focal length of lens depends ?
- Which lens can form real and virtual images ?
- Write the lens formula

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

- Distinguish between convex lens and concave lens ?
- The focal length of a converging lens is 20 cm. An object is 60 cm from the lens. Where will the image be formed and what kind of image is it ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

- Collect the information about lenses used by Gallileo in his Telescope ?

SLIP TEST - 6

PHYSICAL SCIENCES

UNIT-2: ACIDS, BASES AND SALTS

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. What is the value of least distance of distinct vision ?
2. The person suffering from Hypermetropia can see objects clearly which are
3. The upper part of the bifocal lens contains lens.
4. letter is used to represent the power of a lens.

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. What are the maximum and minimum focal lengths of the human eye ?
6. Define the terms in the equation $P = \frac{1}{f}$ (f in meters)
7. Which lens is used if its 'D' value is negative ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. Your friend is suffering from an eye defect. Write any two questions do you ask your friend to find the eye defect.
9. What is angle of vision ? Write its value for a healthy human being.

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. What is Myopia ? How do you correct this defect ? Explain with a neat diagram.

SLIP TEST - 7

PHYSICAL SCIENCES

HUMAN EYE AND COLOUR WORLD

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. Bifocal lens is used to correct which eye defect ?
2. The person suffering from Myopia cannot see the objects which are
3. In a bifocal lens the lower part contains lens.
4. For a lens the D value is '+ ve'. Then what is the lens suggested by the doctor ?

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. What is the power of a lens ? Write its units.
6. Define Presbyopia.
7. What is a 'far point' ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. Doctor has advised you to use 2D lens. What is focal length ?
9. Define 'accommodation' of an eye lens.

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. What is Hypermetropia ? How do you correct the problem ? Explain with a diagram.

SLIP TEST - 8
PHYSICAL SCIENCES
STRUCTURE OF ATOM

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions. **$4 \times \frac{1}{2} = 2M$**

1. What is the range of 'l' values.

- A) 0 to n B) 0 to (n - 1) C) (n - 1) to (n + 1) D) 0 to (n + 1)

2. Which diagram enables us in finding the ascending order of (n + l) values.

3. Match the following.

Group – A

Group – B

- | | | |
|------------------------------------|-------|-----------|
| A) Principal quantum number | [] | i) m_l |
| B) Angular momentum quantum number | [] | ii) m_s |
| C) Magnetic quantum number | [] | iii) n |
| D) Spin quantum number | [] | iv) 'l' |

4. The principle which states that "a degenerate orbital can accommodate two electrons" is

II. Answer the following questions in one sentence. **$3 \times 1 = 3M$**

5. What is the information given by principle quantum number.

6. Write the four quantum numbers of the differentiating electron in 'Na' atom.

7. Write the relation between angular momentum quantum number and magnetic quantum numbers.

III. Answer the following questions in two to four sentences. **$2 \times 2 = 4M$**

8. Explain Hund's Rule with an example.

9. Draw the shapes of p-orbitals.

IV. Answer the following questions in 4 to 8 sentences. **$1 \times 4 = 4M$**

10. Explain Bohr's model of Hydrogen atom and write its limitations.

SLIP TEST - 9
PHYSICAL SCIENCES
STRUCTURE OF ATOM

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions. **$4 \times \frac{1}{2} = 2M$**

1. What is the formula for finding the number of electrons that can fit in a shell ?

2. The number of elliptical orbits added to first shell by Sommerfeld is

A) 0 B) 1 C) 2 D) 3

3. The shape of the d-orbital is

4. Name the scientist who proposed the quantum mechanical model of the atom ?

II. Answer the following questions in one sentence. **$3 \times 1 = 3M$**

5. What is n^2 method.

6. Write the electronic configuration of copper 'Cu'.

7. What are degenerate orbitals ?

III. Answer the following questions in two to four sentences. **$2 \times 2 = 4M$**

8. Distinguish between 'orbit' and 'orbital'.

9. State and explain 'Aufbau' principle.

IV. Answer the following questions in 4 to 8 sentences. **$1 \times 4 = 4M$**

10. What is the significance of 3 quantum numbers in predicting the position of electrons in an atom.

SLIP TEST - 10

PHYSICAL SCIENCES

CLASSIFICATION OF ELEMENTS : THE PERIODIC TABLE

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. Give an example for Dobereiner triads.
2. According to John Newlands which element has the same properties like Na ?
3. Which inert gas differs the general inert gas configuration $ns^2 np^6$?
4. Which group of elements are called Halogens ?

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. What is the Mendeleev's periodic law ?
6. Write the group number and period number of the element with atomic number '12'.
7. What is the collective name given to Lanthanides and Actinides ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. In a group the properties of the elements are same. But in a period why the properties of the elements change ?
9. Using the periodic table predict the compound formed between the element 'X' of group 13. and element 'Y' or group 16.

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Explain how the elements are classified in to s, p, d and f block elements ? What are the advantages of this classification ?

SLIP TEST - 11

PHYSICAL SCIENCES

CLASSIFICATION OF ELEMENTS : THE PERIODIC TABLE

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. Which group of elements are also called as alkali earth metals ?
2. If the second period of the periodic table contains '8' elements, then how many elements does 3rd period contain ?
A) 2 B) 8 C) 18 4) 32
3. When elements are arranged in the increasing order of their atomic weight every 8th element. Starting from a given element resembles its properties. This classification was given by
4. Which block of elements are also called as transition elements.

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. Write the modern periodic law.
6. What is the general electronic configuration of chalcogens.
7. Why some elements are called as p-block elements ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. Name two elements that you would expect to have same chemical properties like Magnesium. What is the basis of your choice ?
9. The electronic configuration of some elements are given below.
a) X = 2 b) Y = 2, 6 C) Z = 2, 8, 2

Now answer the following question.

- i) Which element belongs to second group ?
- ii) Which element belong to 18th group ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Comment on the position of Hydrogen in the modern periodic table.

SLIP TEST - 12
PHYSICAL SCIENCES
CHEMICAL BONDING

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. The ion with '-Ve' sign is called
2. What is the bond angle in "Boran Trifloride".
3. How many covalent bonds does Carbon forms in Methane (CH₄) molecule.
A) 1 B) 2 C) 3 4) 4
4. $Na \rightarrow \dots\dots\dots + 1e^-$

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. How many ' σ ' and ' π ' bonds are there in N₂ molecule.
6. Define octet rule.
7. Name two molecules having sp³ hybridization.

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. 'A', 'B' and 'C' are three elements with atomic numbers 6, 11 and 17 respectively. Then
 - i) Which of them forms ionic bond
 - ii) Which forms covalent bond only
9. Distinguish between ' σ ' and ' π ' bonds.

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Explain the formation of O₂ molecule based on overlapping of atomic orbitals.

SLIP TEST - 13
PHYSICAL SCIENCES
CHEMICAL BONDING

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. Represent sodium element with Lewis dot method.
2. After participating in Chemical bonding the atoms of the elements tries to attain electronic configuration.
3. What is the shape of the water molecule ?
4. The side wise overlapping of p-orbitals leads to which type of bond ?

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. Give the names of two molecules with Ionic Bond.
6. Who proposed the valence Bond theory.
7. What is the similarity between $BeCl_2$ and CO_2 molecules.

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. Explain the formation of $MgCl_2$ with electron transfer method.
9. On what factors does the formation of cation depends upon ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. What is Hybridization ? Explain the formation of BF_3 molecule.

SLIP TEST - 14
PHYSICAL SCIENCES
CURRENT ELECTRICITY

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. Specific Resistance depends upon

- A) Temperature
B) Natural of Material
C) Both A and B
D) None of the above

2. Match the following.

Substance	Character
A) Tungsten	[] P) Alloy
B) Nichrome	[] Q) Semiconductor
C) Germanium	[] R) Metal
A) P-1, Q-2, R-3	B) P-3, Q-2, R-1 C) P-2, Q-3, R-1 D) P-2, Q-1, R-3

3. Information about any device is required to avoid the risk of overload.

- A) Bulb
B) Fuse
C) Switch
D) Heater

4. X : Potential difference is also called voltage

Y : The S.I unit of potential difference is volt

- A) Both X and Y are true
B) X is true, Y is false
C) Both X and Y are false
D) X is false, Y is true

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. Define Resistance ?

6. Silver is Better conductor of electricity than copper. Why do we use copper wire for conduction of electricity ?

7. 90 coulombs of charge is passing through a conductor in 4 minutes. What is the Electricity current through a conductor ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. Why do we consider tungsten as a suitable material for making the filament of a bulb ?

9. Define Electric current ? Write its units in S.I system ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. State Ohm's Law ? Suggest an experiment to verify it and explain the procedure ?

SLIP TEST - 15
PHYSICAL SCIENCES
CURRENT ELECTRICITY

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions. 4 × ½ = 2M

1. A charge moved from a point A to a point B. The work done to move unit charge during this process is called
A) Potential at A B) Potential at B
C) Potential difference between A and B D) Current from A to B
2. Assertion : The device used to measure the current in the circuit is ammeter.
Reason : 1 Ampere = 1 coulomb/sec.
A) Both Assertion and Reason are correct B) Assertion correct, Reason wrong
C) Assertion wrong, Reason correct D) Both Assertion and Reason are wrong
3. Assertion : The amount of charge crossing any cross-section of the conductor in one second is called Electric current.
Reason : Its S.I unit is Ampere and denoted the letter with A.
A) Both Assertion and Reason are correct B) Assertion correct, Reason wrong
C) Assertion wrong, Reason correct D) Both Assertion and Reason are wrong
4. Why does a bird not get the shock when it stands on a high voltage wire ?
A) Less weight B) Bird's Body
C) Feather of Bird D) There is no potential difference between the bird legs.

II. Answer the following questions in one sentence. 3 × 1 = 3M

5. How many types of substances are there based on the ohm's law ? What are they ?
6. A 12V Battery sends 2A current to a circuit but what is the Resulting Resistance value of that circuit ?
7. Volt/Ampere =

III. Answer the following questions in two to four sentences. 2 × 2 = 4M

8. Draw the experimental set up to verify that $\frac{V}{i}$ is constant for conductor.
9. A wire of length 1 m and radius 0.1 mm has a resistance of 100 Ω. Find the resistivity of the material.

IV. Answer the following questions in 4 to 8 sentences. 1 × 4 = 4M

10. How do you verify that Resistance of a conductor is proportional to the length of the conductor for constant cross section area and temperature ?

SLIP TEST - 16
PHYSICAL SCIENCES
ELECTROMAGNETISM

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. The SI unit of magnetic flux density is
2. Magnetic flux is the product of magnetic field induction and
3. Current carrying wire produces
4. Magnetic field lines formed by a barmagnet rings.

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. What is meant by a magnetic flux ? Write its units ?
6. Draw the diagram showing the magnetic field lines of a barmagnet ?
7. The value of the magnetic Induction of a uniform field is 2T. What is the flux passing through the surface of area 1.5 m² perpendicular to field ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. List out the material for Oersted experiment of Electromagnetism. Give precautions when you can perform Experiment ?
9. Rajkumar said to you that Magnetic field lines are open and they start at the North pole of Barmagnet and End at the South pole. What questions do you ask Rajkumar to correct him by saying "field lines are closed".

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. How can you verify that a current carrying wire produces a magnetic field with the help of an Experiment ?

SLIP TEST - 17
PHYSICAL SCIENCES
PRINCIPLES OF METALLURGY

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. The impurity present in the ore is called as
2. Galena is an ore of
3. Write the chemical formula for
4. What is the reducing agent in thermite process ?

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. List three metals that are found in nature in elementary form ?
6. What is the metals present in the Bronze Alloy ?
7. Write the chemical formula for hydrated ferric oxide ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. List three metals that are found in nature as oxides ores.
9. Predict what happens in the field of domestic use of metals If alloy were not discovered ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Explain in brief an experiment to prove that the presence of air and water are essential for corrosion.

SLIP TEST - 18
PHYSICAL SCIENCES
CARBON AND ITS COMPOUNDS

Class : X

Max.Marks : 13

Time : 1 hr.

Name : _____

I. Answer all questions.

$4 \times \frac{1}{2} = 2M$

1. Write the electronic configurations of Carbon (C)
2. What is the general molecular formula of alkenes ?
3. Which elements show allotropy as carbon ?
4. The bond angle in methane (CH_4) molecule is ?

II. Answer the following questions in one sentence.

$3 \times 1 = 3M$

5. What are hydro carbons ?
6. Name the simplest hydrocarbon ?
7. What is catination ?

III. Answer the following questions in two to four sentences.

$2 \times 2 = 4M$

8. What do you know about the position of carbon atom in periodic table ?
9. What are alkenes ? Write the general formula of alkenes. Give example for alkenes ?

IV. Answer the following questions in 4 to 8 sentences.

$1 \times 4 = 4M$

10. Observe the table and answer the following questions.

Organic Compound	Methane	Ethane	Propene	Butene	Pentyne	Hexyne
Formula	CH_4	C_2H_6	C_3H_6	C_4H_8	C_5H_8	C_6H_{10}

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 Hexyne.