

A decorative border surrounds the central text, featuring various tropical elements: large green monstera leaves, vibrant orange bird-of-paradise flowers, clusters of small yellow berries, and brown coconuts, some of which are cracked open to show white coconut meat.

MOTHER INDIA PUBLIC SCHOOL
BAZPUR

- H A P P Y -

Summer Holiday!

ENJOY

www.mipsbazpur.org

CLASS – XI SCIENCE (2026-27)

GUIDELINES

Wishing you a joyful and refreshing summer break!

May this holiday be filled with laughter, discovery, and quality time with loved ones. Take time to relax, explore your interests, and enjoy every moment.

Along with fun, use this time to engage in your holiday homework—designed to spark creativity, deepen understanding, and make learning enjoyable. Complete it with sincerity, originality, and pride.

Stay safe, stay curious, and come back recharged, ready for new beginnings!

PHYSICS

INSTRUCTIONS.

1. Project file should contain least 10 pages of content.
2. Front paper of project file should have logo of MIPS.
3. Project file is of 15 marks.
4. All case study based questions are compulsory.
5. Each case study base question is of 1 mark.

ADMISSION NO.	NAME OF STUDENT	TOPIC FOR RESEARCH FILE
2478	AABEY NOOR	Quantum Computers and How They Work Study how quantum computers are faster than normal computers.
2485	RAVASHIYA	The Physics Behind Artificial Intelligence (AI Chips) Explore how semiconductor physics helps AI systems work.
2486	RISHABH SAINI	Dark Matter: The Invisible Matter of the Universe Based on recent dark matter detection experiments.
2490	SIMRANJEET KAUR	James Webb Space Telescope and New Space Discoveries Explain how infrared physics helps scientists see distant galaxies.
2500	EKAM JOT SANDHU	Black Holes and Recent Discoveries About Them Include latest findings about supermassive black holes
2501	INSHA NOOR	Quantum Tunneling and Modern Electronics Connected with Nobel Prize-winning research in 2025.
2512	ANMOL SINGH	Can Sound Create Fire Patterns? (Rubens' Tube Physics) A fun project on standing waves and sound energy.
2594	MOHD. SANIB	Physics of Wireless Charging Study electromagnetic induction used in phones and electric cars.

2598	ALSHIFA	Solar Panels and Modern Renewable Energy Physics Explain the photovoltaic effect and latest solar technology.
2613	KHUSHI JAHAN	How Electric Vehicles Use Physics Motors, batteries, regenerative braking, and energy efficiency.
2614	SHIFA	Physics Behind Fast Charging Batteries Study lithium-ion batteries and recent battery improvements. The Science of Superconductors Materials with zero resistance and their future uses.
2655	HARMAN	The Physics of 5G and Future 6G Networks Explain electromagnetic waves and communication technology.
2691	DIKSHA PAL	How GPS Satellites Use Einstein's Relativity A simple application of time dilation
3375	ZAINAB FATIMA	The Physics of Earthquakes and Seismic Waves Study P-waves and S-waves.
3693	DIPANSHI CHAUHAN	Why the Sky Changes Color Rayleigh scattering and atmospheric physics.
3834	DEVANSH YADAV	How Drones Fly: Physics of Flight Forces, lift, thrust, and stability.
3847	MOHD FAIZ	Physics Behind Roller Coasters Energy conservation and circular motion.
3852	ALFIZA	The Physics of Magnetic Levitation (Maglev Trains) Electromagnetism and frictionless transport.
4074	MOHD. SHAKIB	How Noise-Cancelling Headphones Work Destructive interference of sound waves.
4096	MANJEET DIWAKAR	Physics of Sports Technology Motion sensors, smart balls, Hawk-Eye technology, etc.
4097	MOFIZA	Recent Discovery of Quantum Vortex States Simplified explanation of new quantum matter discoveries.
4129	ROZY PARVEEN	Electron Crystals in Ultra-Thin Materials A modern topic from material physics research.
4134	NIKITA PAL	The Physics of Climate Change Greenhouse effect, heat transfer, and radiation.

4161	SUHAIL	Physics Behind Fusion Energy (Artificial Sun Projects) Explain nuclear fusion and future clean energy.
4314	MOHD. ALTAMASH	How MRI Machines Work Magnetism and radio waves in medical physics
4518	SIMARJEET KAUR	The Science of Exoplanets and Space Exploration Detection methods and recent discoveries
4609	SUKHMANDEEP KAUR	The Physics of Fluid Dynamics and Turbulence Inspired by recent AI-assisted fluid research
4664	MOHD. AMAIR SHEIKH	Can Humans Live on Mars? Physics Challenges Gravity, radiation, oxygen, and temperature.

CASE STUDY BASED QUESTIONS

Q1. A group of students is asked to determine the height of their school building using basic measuring instruments. They use a measuring tape to find the length of the building's shadow and a meter scale to measure the shadow of a vertical stick of known height. During the experiment, they notice that different students record slightly different values because of observational errors. The science teacher explains the importance of accuracy, precision, significant figures, and proper SI units in measurements. The students then calculate the height using proportionality. One student records the answer as 18.2367 m while another writes it as 18.2 m.

Questions:

1. Define accuracy and precision.
2. Which SI unit is used for length?
3. If a stick of height 1.5 m casts a shadow of 2 m and the building's shadow is 24 m, calculate the height of the building.
4. Express the final answer using correct significant figures.
5. Name two possible sources of error in this experiment.

Q2. During the annual sports meet, a runner starts from rest and runs along a straight 100 m track. In the first 4 seconds, the athlete accelerates uniformly and then continues with constant velocity for the next 8 seconds. The sports teacher records the motion carefully to explain concepts of speed, velocity, and acceleration. Another student mistakenly says that speed and velocity are always the same. The teacher clarifies the difference using examples from the race.

Questions:

1. Define uniform acceleration.
2. If the athlete reaches a velocity of 8 m/s in 4 s, calculate the acceleration.
3. Calculate the distance covered during the acceleration phase.
4. Find the distance covered during the next 8 s at constant velocity.
5. Determine the total distance covered by the athlete.

Q3. A car manufacturing company is testing a new electric car on a straight highway. The car starts from rest and accelerates uniformly for 10 seconds, reaching a velocity of 20 m/s. Engineers use digital instruments to record time and velocity accurately. They discuss how modern instruments reduce random errors in measurements. After accelerating, the car maintains constant speed for another 15 seconds. The data collected is later analyzed using equations of motion.

Questions:

1. What is the SI unit of acceleration?
2. Calculate the acceleration of the car.
3. Find the distance travelled during acceleration.
4. Calculate the distance covered at constant speed.
5. Find the total distance travelled by the car in 25 s.

Q4. In a physics laboratory, students use a screw gauge to measure the diameter of a thin copper wire. The teacher explains least count, zero error, and significant figures before the experiment begins. Some students notice that the screw gauge does not read zero when fully closed. They are instructed to correct the reading before calculating the final diameter. The measured value is very small, so the teacher also introduces scientific notation for expressing measurements.

Questions:

1. What is meant by least count?
2. Why is scientific notation useful in measurements?
3. A screw gauge has a pitch of 1 mm and 100 divisions on the circular scale. Calculate its least count.
4. If the observed reading is 0.324 cm and the zero error is +0.004 cm, find the corrected diameter.
5. Express the corrected diameter in scientific notation.

Q5. A metro train starts from a station and moves along a straight track. It accelerates uniformly from rest to 25 m/s in 20 s. After traveling for some time at constant speed, the driver applies brakes and the train stops uniformly in 10 s. Passengers observe that they move slightly forward when brakes are applied. The physics teacher on the train explains that motion can be described using velocity-time relations and acceleration.

Questions:

1. Calculate the acceleration of the train during the first 20 s.
2. Find the distance travelled during acceleration.
3. Calculate the retardation during braking.
4. Find the distance travelled while stopping.
5. Draw the nature of the velocity-time graph for this motion.

Q6. Scientists are observing a small research rocket launched vertically upward. The rocket moves in a straight line and its velocity increases uniformly during the first stage of launch. Highly sensitive instruments are used to measure time, distance, and velocity. The scientists emphasize that every physical quantity must include both magnitude and unit. During analysis, students are asked to convert measurements from kilometres to meters and from minutes to seconds.

Questions:

1. What are fundamental physical quantities?
2. Name any two derived quantities.
3. A rocket increases its velocity from 10 m/s to 70 m/s in 12 s. Calculate acceleration.
4. Find the displacement covered during this time.
5. Convert 3.5 km into meters.

Q7. A delivery boy rides his scooter on a straight road to deliver packages. He moves with a velocity of 12 m/s for 5 minutes and then increases his speed uniformly to 20 m/s in 10 seconds to avoid traffic delay. The company tracks his motion using GPS devices. His manager explains that displacement depends on initial and final positions while distance depends on the actual path covered. The motion data is later used to estimate fuel efficiency.

Questions:

1. Differentiate between distance and displacement.
2. Calculate the distance travelled in the first 5 minutes.
3. Find the acceleration during the next 10 s.
4. Calculate the additional distance travelled during acceleration.
5. Determine the total distance covered.

Q8. Students in a laboratory perform an experiment using a pendulum to measure time intervals. They notice that repeated measurements are not exactly the same due to reaction time and observational limitations. Their teacher explains random and systematic errors and asks them to calculate the average value of time period. The experiment highlights the importance of repeated measurements in physics. The students are also taught how to represent measured quantities with proper significant figures.

Questions:

1. What are random errors?
2. Why are repeated observations necessary?
3. The recorded time periods are 2.1 s, 2.2 s, 2.0 s, 2.1 s, and 2.2 s. Calculate the average time period.
4. Express the average using appropriate significant figures.
5. Name the SI unit of time.

Q9. A bus traveling on a straight highway at 24 m/s suddenly sees an obstacle ahead. The driver immediately applies brakes, producing a uniform retardation of 3 m/s^2 . Passengers inside the bus experience a forward jerk due to sudden deceleration. Traffic police later analyse the stopping distance to check whether the bus was moving within safe speed limits. The case helps students understand equations of motion and practical applications of physics in road safety.

Questions:

1. What is retardation?
2. Calculate the time taken by the bus to stop.
3. Find the stopping distance of the bus.
4. What will be the velocity of the bus after 4 s of braking?
5. Why do passengers jerk forward when brakes are applied suddenly?

Q10. A cricket academy uses a bowling machine that projects balls in a straight line toward batsmen for practice. The machine accelerates the ball uniformly from rest to 30 m/s in 0.5 s. Coaches use measuring instruments and high-speed cameras to analyse the motion accurately. Students observing the experiment discuss the importance of SI units, dimensional consistency, and equations of motion in sports technology. The data collected helps in improving player reaction time.

Questions:

1. Calculate the acceleration of the cricket ball.
2. Find the displacement of the ball during acceleration.
3. What is dimensional formula of velocity?
4. Name the SI unit of force.
5. Why are high-speed cameras useful in such experiments?

CHEMISTRY**PROJECT TOPICS**

1. Checking bacterial contamination in drinking water by testing sulphide ion
2. Study of methods of purification of water
3. Testing hardness, presence of Iron, Fluoride, Chloride etc. in drinking water and causes of excess

4. Investigation of foaming capacity of soaps and effect of Sodium carbonate
 5. Study acidity of different samples of tea leaves
 6. Determination of rate of evaporation of different liquids
 7. Effect of acids and bases on tensile strength of fibres
 8. Study acidity of fruit and vegetable juices
- Content Accuracy & Concept Clarity-6
 Procedure & Observation-5
 Analysis & Conclusion-5
 Creativity & Presentation-4
 Practical Understanding (Viva/Originality)-5

STUDENT-WISE DISTRIBUTION

Roll No.	Student Name	Assigned Topic
1	Aabey Noor	Checking bacterial contamination in drinking water by testing sulphide ion
2	Ravashiya	Study of methods of purification of water
3	Rishabh Saini	Testing hardness, presence of Iron, Fluoride, Chloride etc. in drinking water and causes of excess
4	Simranjeet Kaur	Investigation of foaming capacity of soaps and effect of Sodium carbonate
5	Ekam Jot Sandhu	Study acidity of different samples of tea leaves
6	Insha Noor	Determination of rate of evaporation of different liquids
7	Anmol Singh	Effect of acids and bases on tensile strength of fibres
8	Mohd Sanib	Study acidity of fruit and vegetable juices
9	Alshifa	Checking bacterial contamination in drinking water by testing sulphide ion
10	Khushi Jahan	Study of methods of purification of water
11	Shifa	Testing hardness, presence of Iron, Fluoride, Chloride etc. in drinking water and causes of excess
12	Harman	Investigation of foaming capacity of soaps and effect of Sodium carbonate
13	Diksha Pal	Study acidity of different samples of tea leaves
14	Zainab Fatima	Determination of rate of evaporation of different liquids
15	Kamrul Hasan	Effect of acids and bases on tensile strength of fibres
16	Dipanshi Chauhan	Study acidity of fruit and vegetable juices
17	Devansh Yadav	Checking bacterial contamination in drinking water by testing sulphide ion
18	Mohd Faiz	Study of methods of purification of water
19	Alfiza	Testing hardness, presence of Iron, Fluoride, Chloride etc. in drinking water and causes of excess
20	Mohd Shakib	Investigation of foaming capacity of soaps and effect of Sodium carbonate
21	Manjeet Diwakar	Study acidity of different samples of tea leaves
22	Mofiza	Determination of rate of evaporation of different liquids
23	Rozy Parveen	Effect of acids and bases on tensile strength of fibres
24	Nikita Pal	Study acidity of fruit and vegetable juices
25	Suhail	Checking bacterial contamination in drinking water by testing sulphide ion
26	Mohd Altamash	Study of methods of purification of water
27	Simarjeet Kaur	Testing hardness, presence of Iron, Fluoride, Chloride etc. in drinking water and causes of excess
28	Sukhmandeep Kaur	Investigation of foaming capacity of soaps and effect of Sodium carbonate
29	Mohammad Amair Sheikh	Study acidity of different samples of tea leaves

ENGLISH

General Instructions for Students

- The following chapters are not yet completed in class. Students must first READ the assigned chapter carefully from NCERT before attempting the questions.

- Prepare the work in a neat handwritten file.
- Write all answers in your own words.
- Use coloured headings and proper margins.
- Read the chapter thoroughly and understand the theme, characters and message.
- Prepare the additional work carefully such as Mind Map, Flow Chart or Character Sketch.
- Complete both Poster Making and Advertisement Writing questions.
- Include relevant drawings/pictures wherever possible.
- Maintain neatness and proper presentation throughout the file.

Marking Scheme

Criteria	Marks
Answers to Questions	10
Mind Map / Flow Chart / Character Sketch	5
Poster Making & Advertisement Writing	5
Creativity & Presentation	3
Neatness & Organisation	2

Roll Number Wise Work Distribution

Roll Numbers	Chapter Name	Questions / Work Assigned
1, 8, 15, 22, 29	The Summer of the Beautiful White Horse	<ol style="list-style-type: none"> 1. Describe the character of Aram. 2. Why was the tribe famous for honesty? 3. Explain Mourad's love for animals. 4. Why did the boys return the horse? 5. What moral lesson do you learn from the story? <p>Additional Work:</p> <ul style="list-style-type: none"> • Flow Chart of events • Character Sketch of Mourad <p>Writing Section:</p> <ul style="list-style-type: none"> • Make a Poster on "Honesty is the Best Policy". • Draft an Advertisement for Horse Riding Classes.
2, 9, 16, 23, 30	The Address	<ol style="list-style-type: none"> 1. Why did the narrator visit Mrs Dorling? 2. How did war affect the narrator's family? 3. Explain the significance of the title. 4. Describe Mrs Dorling's behaviour. 5. What does the story teach about memories and loss? <p>Additional Work:</p> <ul style="list-style-type: none"> • Mind Map on War Effects • Flow Chart of events <p>Writing Section:</p> <ul style="list-style-type: none"> • Prepare a Poster on "Say No to War". • Draft an Advertisement for a Museum of Historical Memories.
3, 10, 17, 24	We're Not Afraid to Die if We Can All Be Together	<ol style="list-style-type: none"> 1. Describe the challenges faced during the voyage. 2. How did the family show courage? 3. Explain the role of teamwork in survival. 4. What qualities of the children impressed you most? 5. What inspiration do you get from the story? <p>Additional Work:</p> <ul style="list-style-type: none"> • Flow Chart of the Voyage • Mind Map on Survival Skills

		<p>Writing Section:</p> <ul style="list-style-type: none"> • Design a Poster on “Disaster Preparedness”. • Draft an Advertisement for Adventure Camps.
4, 11, 18, 25	The Adventure	<ol style="list-style-type: none"> 1. What made Professor Gaitonde curious about the city? 2. Explain the concept of parallel world theory. 3. Describe the role of history in the story. 4. What differences did the professor notice? 5. Do you think science fiction helps imagination? Why? <p>Additional Work:</p> <ul style="list-style-type: none"> • Timeline / Flow Chart of Events • Mind Map on Parallel Worlds <p>Writing Section:</p> <ul style="list-style-type: none"> • Prepare a Poster on “Science and Imagination”. • Draft an Advertisement for a Science Exhibition.
5, 12, 19, 26	Mother’s Day	<ol style="list-style-type: none"> 1. Describe the role of Mrs Pearson in the family. 2. Why did Mrs Fitzgerald exchange personalities? 3. Explain the behaviour of Doris, Cyril and George. 4. How did the family’s attitude change in the end? 5. What message does the play give about women’s respect? <p>Additional Work:</p> <ul style="list-style-type: none"> • Character Sketch of Mrs Pearson • Family Relationship Mind Map <p>Writing Section:</p> <ul style="list-style-type: none"> • Make a Poster on “Respect Mothers”. • Draft an Advertisement for Mother’s Day Celebration Event.
6, 13, 20, 27	Birth	<ol style="list-style-type: none"> 1. Describe the character of Dr Andrew Manson. 2. Why was the situation difficult during the delivery? 3. Explain the role of responsibility in the chapter. 4. What qualities of the doctor impressed you most? 5. What message does the story give about dedication? <p>Additional Work:</p> <ul style="list-style-type: none"> • Flow Chart of events • Mind Map on Medical Ethics <p>Writing Section:</p> <ul style="list-style-type: none"> • Design a Poster on “Health Awareness”. • Draft an Advertisement for a Hospital or Health Camp.
7, 14, 21, 28	Silk Road	<ol style="list-style-type: none"> 1. Describe the journey to Mount Kailash. 2. Explain the difficulties faced during the journey. 3. What does the chapter teach about spirituality? 4. Describe Tibetan culture shown in the chapter. 5. Why is determination important in life? <p>Additional Work:</p> <ul style="list-style-type: none"> • Map Work / Route Flow Chart • Mind Map on Tibetan Culture <p>Writing Section:</p> <ul style="list-style-type: none"> • Prepare a Poster on “Save Cultural Heritage”. • Draft an Advertisement for a Travel Agency.

MATHEMATICS

Instructions: Complete all the work in a project file using A4 size sheets.

 Chapters: Sets, Relations & Functions

 Objectives:

Develop logical thinking and reasoning

Apply concepts to real-life situations

Enhance creativity and presentation skills

Build problem-solving confidence

PART A: CONCEPT BUILDER (Warm-up)

1. Mind Map Activity(2 M)

Create a colourful mind map/chart showing:

Types of Sets (finite, infinite, subset, universal, etc.)

Operations on sets

Types of Relations

Types of Functions

Use diagrams, symbols, and examples.

2. Real-Life Connection (3M)

Write 2 real-life examples each for:

Sets , Relations ,Functions

Example:

Students in a class \rightarrow Set

Teacher assigning roll numbers \rightarrow Function

PART B: ACTIVITY BASED TASKS (5 M)

Activity 1: Venn Diagram Project

Take a real-life survey (minimum 10 people):

Example: Favourite Subject / Sports

Represent data using: Venn Diagram

Union, Intersection, Complement

PART C: CASE STUDY QUESTIONS (Skill-Based)(write one case study for each topic)

DATA / SURVEY BASED CASE STUDY (Sets) (5M)

Based on collection of data and grouping

Example Situations: 1- sports preference(Students liking Cricket, Football, Both or None etc.)

2- Stream Selection (Subjects chosen by students)

3- Social media users (Instagram, YouTube , facebook, etc.)

Concepts Covered: Union (\cup), Intersection (\cap), Complement & Venn Diagram

RELATIONSHIP / CONNECTION BASED CASE STUDY (Relations) (5M)

Example Situations: Students Subjects relation

City connections

Concepts Covered: Relation definition ,Domain & Range

INPUT-OUTPUT MACHINE CASE STUDY (Functions)(5M)

Based on rule-based mapping

Example Situations: Salary calculation: $f(x) = \text{base} + \text{bonus}$

Mobile recharge \rightarrow data given

Marks \rightarrow grade system

Concepts Covered: Function definition ,Domain & Range

BIOLOGY

(CBSE Exam Oriented Creative Assignment)

Student's Name : _____

Class & Section : _____

Roll Number : _____

Submission Date : 02 July 2026(Thursday) _____

CHAPTERS INCLUDED

1. Breathing and Exchange of Gases

2. Body Fluids and Circulation

3. Excretory Products and their Elimination

OBJECTIVES OF THE ASSIGNMENT

This assignment is designed to:

Strengthen NCERT concepts

Develop scientific thinking

Improve diagram and answer-writing skills

Enhance competency-based learning

Prepare students for school examinations and future Board preparation

Encourage creativity and research skills

GENERAL INSTRUCTIONS

Use an A4 size Biology file/project folder.

All work should be handwritten neatly.

Draw colourful labelled diagrams wherever required.

Use charts, tables, flowcharts, and pictures creatively.

Highlight important terms and NCERT keywords.

Submit the assignment on time.

SECTION – A

CREATIVE PROJECT TOPICS

(One Topic for Each Student)

Abey Noor

1. Human Respiratory System Working Model

Prepare a working model showing the mechanism of breathing using balloons/plastic bottles.

Insha Noor

2. Journey of Oxygen

Create a flowchart showing the path of oxygen from atmosphere to body cells.

Rozy Parveen

3. Smoking and Lung Health

Prepare an awareness project on harmful effects of smoking and tobacco on lungs.

Ravashya

4. Respiratory Disorders File

Prepare a creative file on asthma, emphysema, pneumonia, and occupational respiratory disorders.

Zainab Fatima

5. Comparative Study of Breathing Rates

Record breathing rates of family members before and after exercise and represent data graphically.

Alfiza

6. Blood Group Survey Project

Conduct a blood group survey of at least 20 people and prepare graphs/charts.

Alshifa

7. 3D Heart Model

Prepare a labelled 3D model of human heart using eco-friendly materials.

Shifa

8. Double Circulation Concept Chart

Design a colourful chart explaining pulmonary and systemic circulation.

Diksha Pal

9. ECG and Heart Health

Research ECG, heartbeat regulation, and common heart diseases.

Nikita Pal

10. Blood Donation Awareness Campaign

Prepare posters, slogans, and awareness material on blood donation.

Simarjeet Kaur

11. Artificial Kidney (Dialysis) Project

Prepare a working/non-working model showing dialysis process.

Jashan preet Kaur

12. Kidney Stone Awareness File

Prepare a case-study project on causes, symptoms, and prevention of kidney stones.

Mohd Faiz

13. Nephron 3D Model

Prepare a labelled nephron model showing urine formation.

Mohd Shanib

14. Osmoregulation in Humans

Prepare a creative chart explaining water balance and osmoregulation.

Mohd Shakib

15. Urine Analysis Activity

Collect information about normal and abnormal constituents of urine and prepare a report.

Manjeet Diwakar

16. Fitness and Healthy Lifestyle Journal

Prepare a 10-day record of:

Water intake

Pulse rate

Physical activity

Breathing rate

and analyse the results scientifically.

SECTION – B

IMPORTANT DIAGRAM PRACTICE

Draw and Label the Following Diagrams:

Breathing and Exchange of Gases

Human Respiratory System

Structure of Alveolus

Mechanism of Breathing

Oxygen Dissociation Curve

Body Fluids and Circulation

Human Heart

Cardiac Cycle

Double Circulation

ECG Graph

Excretory Products and their Elimination

Human Excretory System

Structure of Nephron

Counter Current Mechanism

Juxtaglomerular Apparatus (JGA)

SECTION – C

SHORT ANSWER TYPE QUESTIONS & HOTS QUESTIONS

Chapter : Breathing and Exchange of Gases

Short Answer Questions

Differentiate between inspiration and expiration.

What is tidal volume?

Explain transport of carbon dioxide in blood.

Define respiratory quotient.

What is emphysema?

HOTS Questions

Why do mountaineers face breathing difficulty at high altitudes?

Explain why carbon monoxide is highly dangerous for humans.

Why does breathing rate increase during exercise?

Predict the effect if alveoli become damaged.

Why is haemoglobin called respiratory pigment?

Chapter : Body Fluids and Circulation

Short Answer Questions

What are the functions of plasma?

Differentiate between arteries and veins.

What is double circulation?

Explain cardiac cycle briefly.

What is blood pressure?

HOTS Questions

Why does the left ventricle have thicker muscular wall than right ventricle?

Explain why humans need double circulation.

Predict what may happen if heart valves stop functioning properly.

Why is O blood group called universal donor?

Why is hypertension called a silent killer?

Chapter : Excretory Products and their Elimination

Short Answer Questions

Define ultrafiltration.

What are nitrogenous wastes?

Explain micturition.

What is osmoregulation?

Name different parts of nephron.

HOTS Questions

Why do doctors recommend dialysis in kidney failure?

Explain why dehydration affects urine concentration.

Predict what may happen if glomerulus gets damaged.

Why is human kidney called a natural filter?

Explain why excessive protein intake may affect kidneys.

SECTION – D

NCERT MASTER REVISION TASK

Learn and Write:

Important NCERT terms

Definitions

Scientific names

Important diseases and causes

Important diagrams

Flowcharts and processes

ASSESSMENT SCHEME (25 MARKS)



Criteria	Marks
Content Accuracy	05 Marks
Creativity & Presentation	05 Marks
Diagrams & Models	05 Marks
Scientific Analysis	05 Marks
Neatness & Timely Submission	05 Marks
Total	25 Marks

TEACHER'S MESSAGE

“Biology becomes interesting when we connect concepts with real life and scientific observation.”

Subject Teacher Signature :- _____

Principal Signature :- _____

 Enjoy your vacations and explore Biology creatively while strengthening your concepts for examinations. 

INFORMATION TECHNOLOGY

● Solve UT question paper of IT in your fair notebooks.

● Project work/file:

○ Guidelines:

▪ The file should consist of Introduction page, Acknowledgement page, Index, and 7 to 8 pages of proper explanation and images.

● All the parts of Computer Hardware with images.

● Different types of Networking devices, wired medium (TP, Co-axial, Fibre Optical), and Different topologies.

● 5 Queries in SQL including Create table, Insert, Select, Select with where clause, Update.

● Write a Java code of Hello world and breakdown each part of the code and explain every keyword used in program.

● Marks Distribution:-

Neatness	Proficiency	On Time	Accurate Data	Personal effect
5	5	5	5	5

HINDI

1. निम्नलिखित विषयों पर एक सार्थक परियोजना फ़ाइल तैयार करें-
 क) "मोबाइल फोन का विद्यार्थियों पर प्रभाव".
 ख) "पर्यावरण संरक्षण की आवश्यकता"
 (प्रत्येक विषय की शब्द सीमा लगभग 500 शब्द होनी चाहिए)
- 2) ग्रीष्मकालीन अवकाश में समाचार संकलन
 - प्रतिदिन एक हिंदी समाचार पत्र पढ़ें
 - 10 दिनों के महत्वपूर्ण समाचारों को नोटबुक में लिखें
 - हर समाचार पर 2-3 पंक्तियों में अपनी राय लिखें.

PHYSICAL EDUCATION

Students are required to prepare a Lab manual-Practical Record File neatly and systematically.

Practical-1: Fitness Test Administration

Prepare a record on **SAI Khelo India Fitness Tests** including:

- Aim/Purpose
- Equipment Required
- Procedure
- Scoring Method
- Precautions

Practical-2: Yoga for Lifestyle Diseases

Write the Procedure, Benefits, and Contraindications of any two Asanas for each lifestyle disease. Also draw simple labelled diagrams of the Asanas.

Practical-3: IOA Recognized Sport/Game

Choose any one IOA recognized sport/game and prepare:

- Labelled Diagram of Field/Court
- Labelled Diagram of Equipment
- Rules of the Game
- Important Terminologies
- Fundamental Skills

HOME SCIENCE

1. Select two children of different ages from your neighbourhood and write report on their activities and behaviour. (10)

(Students you should select two children of same age from 5 to 6 years/ 10 to 11 years of age. Observe them and record their activities and behaviour and write the report. Report should cover all aspects of their various developmental characteristics (Emotional, Social, Cognitive, and Language)

Follow the details given below:

- Name
- Father's name
- Age
- Class
- School

- Contact no
- Schedule:

Breakfast Time	
Study Time	
Lunch Time	
Rest Time	
Home work Time	
Playing Time	

According to child schedule table can be changed.

- Emotional Development
- Social Development
- Cognitive Development
- Language Development
- Behaviour with : (Parents, Siblings, Peers)
- Activities

Assessment criteria

Presentation 5

Content 5

2. Make any one article from waste products. (15)

Vase From Bottle Idea

Turn those cold drink or water bottles into pretty vases and make your home go green, in more ways than one!

What waste you need:

Glass or plastic bottle

Paint

Paintbrush

Masking tape (optional)

What to do out of these:

Wash the bottle to clean it and remove the label.

Paint the bottle in a colour of your choice.

Once the paint dries, top it up with another coat of paint so the colour is opaque enough.

You can also use masking tape to make patterns on the bottles.

Before painting, use the tape to make the design you want.

When you remove the tape after spray painting the bottle, that part will still be transparent and will look lovely.

Add a flower and your bottle vase is ready to adorn your living room!

Tin Can Chimes Idea

Add some music to your house using boring, old tin cans.

What waste you need:

3 or more tin cans with lids

Nail and hammer

Washers, one for each tin

Paintbrush

Paint

Wool string

Glitter

What to do out of these:

Paint the tin cans in different colours and add some glitter if you'd like to.

Once they're dry, make a hole at the bottom of each can using the hammer and the nail.

String a long piece of wool through the holes.

Tie the two washers at the other end of the string, inside the tin cans.

Hang the cans in a way that they overlap or hit each other when the wind hits them.

Assessment criteria

Raw material 5

Decoration 5

Cleanliness 5