

Class 6
PHYSICS

MID TERM 1

1. Matter
2. Physical quantity and Measurement

HALF YEARLY ASSESSMENT -

1. Matter
2. Physical quantity and Measurement
3. Force
4. Simple machine

MID TERM 2

4. Simple machines
5. Light

FINAL TERM ASSESSMENT

2. Physical quantity and Measurement
4. Simple machines
5. Light
6. Magnetism

CLASS 6 – PHYSICS (ICSE)

SCOPE OF SYLLABUS (NEP 2020 FORMAT)

MID TERM 1

1. Matter

Concepts

- Definition and nature of matter
- States of matter (solid, liquid, gas)
- Properties of each state
- Change of state (basic idea)
- Interconversion of states (melting, freezing, evaporation, condensation)
- Particle nature of matter (introductory)

Learning Objectives (LOs)

- Identify and classify substances based on states of matter
 - Describe properties of solids, liquids, and gases with examples
 - Characteristics and classification of Matter
 - Explain simple processes of change of state using daily life situations
 - Demonstrate understanding of particle arrangement through models/diagrams
 - Differentiate between physical changes involving matter
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2. Physical Quantity and Measurement

Concepts

- Definition of physical quantities
- Fundamental and derived quantities
- Units (SI units)
- Measurement of length, mass, and time
- Measuring instruments (ruler, balance, stopwatch)
- Estimation and accuracy

Learning Objectives (LOs)

- Define physical quantities and give examples
 - Distinguish between fundamental and derived quantities
 - Use appropriate SI units for measurement
 - Demonstrate correct usage of basic measuring instruments
 - Estimate and record measurements accurately (mass, length as area using square paper, time, temperature)
 - Apply measurement skills in simple real-life contexts
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HALF YEARLY ASSESSMENT

1. Matter (*Revision + Reinforcement & Application*)

Concepts

- Application of properties of matter
- Changes in matter in daily life

Learning Objectives (LOs)

- Analyze examples of changes in matter
 - Classify changes as reversible/irreversible
 - Apply knowledge of matter to real-life situations
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2. Physical Quantity and Measurement (*Revision + Advanced Application*)

Concepts

- Unit conversions
- Accuracy vs precision
- Practical measurement errors

Learning Objectives (LOs)

- Convert units within SI system
 - Identify possible errors in measurement
 - Improve measurement accuracy through proper techniques
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3. Force

Concepts

- Definition of force
- Effects of force (change in shape, speed, direction)
- Motion and Rest, speed
- Types of forces (push, pull; contact and non-contact – basic)
- Examples from daily life Friction and its types - advantage and disadvantage

Learning Objectives (LOs)

- Define force and describe its effects
- Identify types of forces in real-life situations
- Explain how force changes motion or shape
- Conduct simple activities demonstrating force

4. Simple Machines

Concepts

- Definition and purpose of machines
- Types of simple machines (lever, pulley, inclined plane, wheel and axle etc)
- Effort, load, and mechanical advantage (basic idea)
- Order of levers with examples and workings
- MA of levers (simple) numericals
- Uses of simple machines
- Efficiency of Machines

Learning Objectives (LOs)

- Identify different simple machines in surroundings
 - Explain how machines make work easier
 - Differentiate types of simple machines
 - Apply concepts to everyday tools
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MID TERM 2

4. Simple Machines (*Revision + Continuation & Application*)

Concepts

- Types of levers (Class I, II, III)
- Examples and applications
- Efficiency (basic idea)

Learning Objectives (LOs)

- Classify levers based on position of fulcrum, load, and effort
 - Analyze working of simple machines in daily life
 - Evaluate usefulness of machines
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5. Light

Concepts

- Sources of light (natural and artificial)
- Luminous and non-luminous objects
- Rectilinear propagation of light
- Pin-hole camera and its working (properties of image formed)
- Shadows (formation and characteristics)
- Transparent, translucent, opaque objects

Learning Objectives (LOs)

- Differentiate between sources and objects of light
 - Explain how light travels
 - Describe formation of shadows with examples
 - Classify materials based on transmission of light
 - Conduct simple experiments with light and shadows
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FINAL TERM ASSESSMENT

2. Physical Quantity and Measurement (*Revision & Integration*)

Concepts

- Application in experiments
- Data recording and interpretation

Learning Objectives (LOs)

- Apply measurement concepts in practical contexts
 - Record and interpret experimental data
 - Solve numerical problems involving measurement
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4. Simple Machines (*Mastery Level*)

Concepts

- Real-life applications
- Problem-solving using machines

Learning Objectives (LOs)

- Analyze efficiency and use of machines
 - Solve simple problems related to machines
 - Design basic models of simple machines
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5. Light (*Revision + Extended Learning*)

Concepts

- Reflection of light (basic idea)
- Uses of mirrors (introductory)

Learning Objectives (LOs)

- Explain basic reflection of light
 - Identify uses of mirrors in daily life
 - Apply concepts in simple observations
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6. Magnetism

Concepts

- Magnets and their properties
- Poles of a magnet and magnetic field
- Magnetic and non-magnetic materials
- Types and Uses of magnets
- Simple compass (basic idea)
- Electromagnets
- Magnetization and de-magnetization, storage

Learning Objectives (LOs)

- Identify properties of magnets
 - Distinguish between magnetic and non-magnetic materials
 - Explain attraction and repulsion
 - Demonstrate simple uses of magnets
 - Earth's magnetic field
 - Interpret basic working of a compass
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NEP 2020 ALIGNMENT FEATURES (Embedded in Design)

- **Competency-based learning:** Focus on application, analysis, and experimentation
- **Experiential learning:** Activities, demonstrations, real-life examples
- **Spiral progression:** Topics revisited with increasing depth across terms
- **Integration with daily life:** Emphasis on observation and practical relevance
- **Skill development:** Measuring, observing, classifying, analyzing

80 Marks QP format:

Compulsory 40 marks

Q1. MCQ - 15 marks (Knowledge, Application, Analysis, Interpretation, Evaluation)

Q2. Fill in the blanks 6 marks + 4 marks of Skill/Application Questions

Q3. Short questions 2x6 + 3 marks (Knowledge, Application, Analysis, Interpretation, Skill, Evaluation)

Any four out of six questions to be answered- 40 Marks

Q4 to Q9

3+3+4 or 5+5 or 4+4+2 mark distributed questions. The type of questions involved - Knowledge, Application, Analysis, Interpretation, Skill, Evaluation.

Application, Interpretation, Analysis and Skill based questions will be used to reduce the habit of rote learning.