

**PHYSICS SCHEME OF WORK, SS1 1<sup>ST</sup> TERM.****WEEK 1**

Topic: INTRODUCTION TO PHYSICS

- Definition of Physics
- Applications of Physics (in automobile, space, aeronautics, electronics, communication, medicine, warfare, etc.)
- Fundamental and Derived Quantities and their Units

**WEEK 2**

Topic: POSITION, DISTANCE AND DISPLACEMENT

- Measurement of Distance
- Concept of Direction
- Concept of Position and Position Coordinate

**WEEK 3**

Topic: TIME

- Concept of Time
- Ways of Measuring Time

**WEEK 4**

Topic: MOTION

- Types of Motion Random, Oscillatory, Vibration, Translational/Rectilinear, Rotational Motion
- Relative Motion

**WEEK 5**

Topic: MOTION

- Cause and Effects of Motion
- Types of Force: Contact Force and Force Field
- Friction (Solid Friction)
- Types of Friction: Static Friction and Dynamic Friction
- Coefficient of Limiting Friction
- Advantages and Disadvantages of Friction
- Methods of reducing Friction

**WEEK 6**

Topic: SPEED AND VELOCITY

- Concept of Speed
- Concept of Velocity
- Uniform/Non-uniform Speed/Velocity
- Distance/Displacement-Time Graph

**WEEK 7**

Topic: RECTILINEAR ACCELERATION

- Concept of Acceleration
- Uniform/Non-Uniform Acceleration
- Velocity-Time Graph
- Analysis of Rectilinear Motion (Equations of Uniformly Accelerated Motion)

**WEEK 8**

Topic: SCALARS AND VECTORS

- Concept of Scalars
- Concept of Vectors
- Distinction between Scalars and Vectors
- Vector Representation

**WEEK 9**

Topic: VECTORS

- Addition of Vectors
- Resolution of Vectors

**WEEK 10**

Topic: WORK ENERGY AND POWER

- Concept of Work, Energy and Power
- Inter-changeability of Work and Energy

**WEEK 11**

Topic: WORK ENERGY AND POWER

- Determination of Work, Energy and Power
- Work done in a Force Field

**WEEK 12**

Topic: WORK ENERGY AND POWER

- Types of energy (Mechanical). Potential Energy and Kinetic Energy
- Conservation of Mechanical Energy
- World Energy Resources: Renewable Energy Resources and Non-Renewable Energy Resources

**WEEK 13**

Topic: REVISION

**WEEK 14**

Topic: EXAMINATIONS