













**Bipin Tripathi Kumaon Institute of Technology**  
**Basic Mechanical Engg Lab**

| Sl. No. | Name of Machine/Equipment       | Photo  |
|---------|---------------------------------|--|
| 1       | Model of 2-stroke Petrol Engine |  A photograph of a 2-stroke petrol engine model. The model is primarily red and blue, with a prominent red cylinder and a blue crankcase. It is mounted on a white base which includes a technical diagram of the engine's internal components. |
| 2       | Model of 4-stroke Petrol Engine |  A photograph of a 4-stroke petrol engine model. This model is more complex, featuring a red cylinder, a blue crankcase, and a large red flywheel on the right side. It is mounted on a white base with a technical diagram.                   |
| 3       | Model of 2-stroke Diesel Engine |  A photograph of a 2-stroke diesel engine model. The model is red and blue, with a red cylinder and a blue crankcase. It is mounted on a white base with a technical diagram.   |
| 4       | Model of 2-stroke Diesel Engine |  A photograph of a 2-stroke diesel engine model, similar to the one in row 3. It features a red cylinder, a blue crankcase, and a red flywheel on the right. It is mounted on a white base with a technical diagram.                          |

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| 5 | Working model of Steam Engine                        |  A photograph of a working model of a steam engine. It consists of a cylindrical boiler mounted on a wooden base. A piston rod is connected to a flywheel, and various pipes and valves are visible. The model is connected to a power source via a red cable.                              |
| 6 | Friction Apparatus                                   |  A photograph of a friction apparatus. It features a wooden block with a string attached, which is used to demonstrate the concept of friction. The block is placed on a surface, and the string is pulled to show the effect of friction.  |
| 7 | Fly Wheel Apparatus                                  |  A photograph of a fly wheel apparatus. It shows a large, dark, circular flywheel mounted on a metal shaft. The flywheel is connected to a motor or power source, and it is used to demonstrate the concept of rotational inertia.  |
| 8 | Worm & Worm Wheel Apparatus<br>Single Start 80 Teeth |  A photograph of a worm and worm wheel apparatus. It shows a worm gear meshing with a worm wheel. The worm gear is mounted on a shaft, and the worm wheel is mounted on another shaft. The worm wheel has 80 teeth. The apparatus is used to demonstrate the concept of gear reduction. |

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| <p>9</p>  | <p>Worm &amp; Worm Wheel<br/>Apparatus<br/>Single Start 100 Teeth</p> |      |
| <p>10</p> | <p>Worm &amp; Worm Wheel<br/>Apparatus<br/>Double Start 100 Teeth</p> |    |
| <p>11</p> | <p>Worm &amp; Worm Wheel<br/>Apparatus<br/>Triple Start 100 Teeth</p> |   |
| <p>12</p> | <p>Single Purchase winch Crab<br/>Apparatus</p>                       |  |

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| 13 | Double Purchase winch<br>Crab Apparatus |   |
| 14 | Model of Lancashire Boiler              |   |
| 15 | Model of locomotive Boiler              |  |