

2012 November Exam Preparation

Work Covered: Term 3 and 4

Term 3:

- Focus on:
 - Formulas
 - Definitions
 - Diagrams
 - Application of theory
- Lever
- Mechanical Advantage
- Velocity Ratio (lever, pulley, gear)
- Efficiency
 - $\text{Efficiency} = \text{MA} / \text{VR} \times 100 / 1$
- Wheels and Axles
- Bearings
- Cranks
- Linkages
- Pulleys
- Speed
 - Correct formula
- Gears
- Cams
- Inclined plane/Screw
- Cable Controls
- Pneumatics
- Hydraulics
- Tools
- Safety in the Workshop

Term 4

- Focus on:
 - Symbols
 - Application
- Atom (in relation to electricity)
- Electrons
 - How they move
 - How are they behave

- Static electricity
 - Causes
 - Tribo-electric effect
 - Piezo-electric effect
 - Pyro-electric effect
 - Lightning
 - Faraday Cage
 - Dangers of Static electricity
- Magnetism
 - Discovery
 - Uses
 - Magnetic field
- Induction
- Direct Current
- Alternating Current
- Electro Magnets
- Transformers
- Circuits
 - Series
 - Parallel
 - Multi circuit schematic
- Electronic components
 - Resistors
 - Capacitors
 - Transistor
 - Thyristor
 - Diodes
 - Switches
- Circuit boards
- Soldering
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