# **HPCL Exam Syllabi**

#### Mechanical

- Engineering Mechanics.
- Strength of Materials.
- Theory of Machines.
- Pump and compressors.
- Machining and Machine Tool Operations.
- Metrology and Inspection.
- Computer Integrated Manufacturing.
- Engineering Materials.
- Energy Conversion.
- Heat-Transfer.
- Fluid Mechanics.
- Vibrations.
- Product Design and Development.
- Industrial Safety.
- Thermodynamics.
- Design.
- Fluid Machines.
- Joining.
- Engineering Economy and Costing.
- Production Planning and Control.
- Inventory Control.
- Operations Research.
- Management Information System.

#### Chemical

- Mass Transfer.
- Polymer Testing.
- Polymer Synthesis.
- Polymer Technology.
- Heat Transfer.
- Thermodynamics.
- Chemical Reaction Engineering.

### Instrumentation

- Control Systems and Process Control.
- Analytical, Optical and Bio-medical Instrumentation.
- Mechanical Measurement and Industrial Instrumentation.

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- Signals and Systems.
- Communications.
- Basics of Circuits and Measurement Systems.
- Electrical and Electronic Measurements.
- Analog Electronics.
- Digital Electronics.

## Civil

- Soil Mechanics.
- Concrete Structures.
- Noise Pollution.
- Mechanics.
- Fluid Mechanics and Hydraulics.
- Hydrology.
- Irrigation.
- Surveying.
- Structural Analysis.
- Foundation Engineering.
- Steel Structures.
- Municipal Solid Wastes.
- Water requirements.
- Air Pollution.

#### **Electrical**

- Power Systems.
- Electrical and Electronic Measurements.
- Analog and Digital Electronics.
- Electric Circuits and Fields.
- Power Electronics and Drives.
- Signals and Systems.
- Electrical Machines.
- Control Systems.

# **General Aptitude**

- Intellectual Potential.
- Logical Reasoning.
- Test of English Language.
- Data Interpretation.
- Quantitative Aptitude.
- Electronics & Telecommunication

- Communication Systems.
- Electromagnetic Theory.
- VLSI Technology.
- Control Systems.
- Digital Signal Processing.
- Measurement & Instrumentation.
- Electronic Circuits Design.
- Micro processor & its Applications.
- Signals and Systems.