

## IOCL Pipelines Division Non Executive Exam Pattern

### IOCL Pipelines Division Engineering Assistant Test Pattern

Subject Name	Questions	Marks
Concerned Engineering Subjects (Diploma Level)	75 Questions	75 Marks
General Aptitude	25 Questions	25 Marks
Reasoning		
General English		
Numerical Aptitude		
General Knowledge		
<b>Total</b>	<b>100 Questions</b>	<b>100 Marks</b>
<b>Duration: 90 Minutes</b>		

### IOCL Pipelines Division Technical Attendant Exam Pattern

Subject Name	Questions	Marks
Technical Disciplines from General Science and ITI trades (Motos Mechanic, Electrical, Fitter)	75 Questions	75 Marks
General Aptitude		
Reasoning		

# Indian Oil Corporation Limited



General English	25 Questions	25 Marks
Numerical Aptitude		
General Knowledge		
<b>Total</b>	<b>100 Questions</b>	<b>100 Marks</b>
<b>Duration: 90 Minutes</b>		

*Note: The duration of the IOCL Pipelines Division Non Executive Written Test 2021 for PwBD candidates will be 120 minutes.*

## IOCL Pipelines Division Non Executive Syllabus - Subject Wise

### IOCL Pipelines Division Engineering Assistant Numerical Aptitude Syllabus

- Allegation Of Mixture
- Area
- Average
- Banker's Discount
- Boats And Streams
- Calendar
- Chain Rule
- Clocks
- Compound Interest
- Decimal Fractions
- H.c.f. And L.c.m Of Numbers
- Heights & Distances
- Logarithms
- Operations On Numbers
- Partnership
- Percentage

- Permutations And Combinations
- Pipes And Cisterns
- Problems On Ages
- Problems On Numbers
- Problems On Trains
- Profit And Loss
- Races And Games Of Skill
- Ratio And Proportion
- Simple Interest
- Simplification
- Stock & Shares
- Time And Distance
- Time And Work
- True Discount
- Volume And Surface Area

## **IOCL Pipelines Division Technical Attendant Reasoning Syllabus**

- Decision Making
- Deductive Reasoning/Statement Analysis
- Dices
- Directions
- Embedded Images
- Figure Matrix
- Input-Output
- Mirror and Water Images
- Odd One Out
- Picture Series and Sequences
- Paper Folding
- Puzzles
- Pattern Series and Sequences
- Order & Ranking
- Seating Arrangements
- Shape Construction
- Statement and Assumptions
- Statement and Conclusions
- Syllogism
- Alphanumeric series
- Reasoning Analogies
- Artificial Language

- Blood Relations
- Calendars
- Cause and Effect
- Clocks
- Coding-Decoding
- Critical path
- Cubes and cuboids
- Data Sufficiency

## **IOCL Pipelines Division Non Executive General English Syllabus**

- Tenses
- Grammar
- Fill in the Blanks
- Synonyms
- Vocabulary
- Adverb
- Subject-Verb Agreement
- Error Correction
- Idioms & Phrases
- Verb
- Sentence Rearrangement
- Unseen Passages
- Articles
- Antonyms
- Comprehension

## **IOCL Pipelines Division Engineering Assistant General Knowledge Syllabus**

- Countries & Capitals
- General Politics
- Culture
- Knowledge of Current Events
- Geography
- History
- Sports
- Science – Inventions & Discoveries
- <https://www.freshersnow.com/syllabus/>
- India and its neighboring countries

- Budget and Five Year Plans
- Current Affairs – National & International
- Indian Constitution
- Economy, Banking, and Finance
- Scientific ResearchEconomy
- Important Financial & Economic News

## IOCL Pipelines Division Non Executive General Science Syllabus

- Laws of motion
- Units and measurements
- Thermal properties of matter
- Gravitation
- Kinetic theory
- Wave optics
- Work, energy, and power
- Physical-world
- Oscillations
- Ray optics and optical instruments
- Mechanical properties of solids
- Thermodynamics
- Motion in a straight line
- Nuclei
- Motion in a plane
- Systems of particles and rotational motion
- Mechanical properties of fluids
- Moving charges and magnetism
- Electric charges and fields
- Electrostatic potential and capacitance
- Electromagnetic induction
- Current electricity
- Magnetism and Matter
- Dual nature of radiation and matter
- Alternating current
- Atoms
- Electromagnetic waves
- Semiconductor electronics
- Waves
- The s – block elements
- Communication systems

# Indian Oil Corporation Limited



- Organic chemistry-some basic principles and techniques and hydrocarbons
- P-block elements – group 14 (carbon family)
- Solutions
- Surface chemistry
- Thermodynamics
- Chemical equilibrium and acids-bases
- Hydrogen and its Compounds
- Atomic structure
- D and f block elements & coordination compounds
- Classification of elements and periodicity in properties
- Environmental chemistry
- Biomolecules
- Solid-state
- States of matter: gasses and liquids
- Chemistry in everyday life
- Stoichiometry
- General principles of metallurgy
- Organic compounds containing c, h & o
- P- block elements group 13 (boron family)
- P-block elements
- Chemical bonding and molecular structure
- Electrochemistry and chemical kinetics
- Haloalkanes and haloarenes
- Polymers
- Organic compounds containing nitrogen

## **IOCL Pipelines Division Non Executive Concerned Engineering Subjects**

### **Electrical Engineering**

- Electric Circuits
- Electrical Machines
- Power Systems
- Utilization & Control Systems
- Analog and Digital Electronics
- Power Electronics and Drives
- Synchronous Machines
- Estimation and Costing
- Basic concepts
- Generation
- Circuit law

# Indian Oil Corporation Limited



- Measurement and Measuring Instruments
- AC Fundamentals
- Fractional Kilowatt Motors
- Single-phase Induction Motors
- Transmission and Distribution
- Utilization and Electrical Energy
- Electrical Machines
- Magnetic Circuit

## **Mechanical Engineering**

- Engineering Mechanics
- Energy conservation
- Engineering Materials
- The Strength of Materials
- Management Information System
- Machining and Machine Tool Operations
- Thermodynamics
- Meteorology and Inspection
- Heat Transfer
- Fluid Mechanics
- Theory of Machines
- Operations Research
- Machine Design
- Product Design and Development
- Fluid Machines
- Industry Safety
- Inventory Control
- Machining and Machine Tool Operations
- Computer Integrated Manufacturing Design
- Inventory Control
- Metal Casting
- Production Planning and Control

## **Instrumentation Engineering**

- Basics of Circuits and Measurement Systems
- Communications
- Control Systems and Process Control
- Transducers, Mechanical Measurement, and Industrial Instrumentation
- Signal and Systems

- Analytical, Optical and Bio-medical Instrumentation
- Instrumentation
- Analog Electronics
- Electrical and Electronic Measurements
- Analytical, Optical, and Biomedical
- Digital Electronics

## **Electronics & Communication**

- Analog & Digital Communications
- Analog Circuits
- Networks
- Electronic Devices
- Signals and Systems
- Digital circuits
- Engineering Mathematics
- Electromagnetic
- Control Systems

## **Chemical Engineering**

- Atoms and Molecules
- Transition Metal Chemistry
- Photochemistry
- Stereochemistry
- Reaction Dynamics
- Organic Reactions
- Spectroscopic Techniques
- Electrochemistry

## **Automobile Engineering**

- Manufacturing Methods
- Strength of Materials
- Engineering Thermodynamics
- Heat Transfer and Combustion
- Automotive Petrol Engines
- Engineering Analysis and Numerical Methods
- Automotive Design Engines
- Material Science and Technology
- Power Units and Transmission



# Indian Oil Corporation Limited



- Automotive Chassis
- Vehicle Body Engineering
- Automotive Pollution and Control
- Quality Control and Reliability Engineering
- Automotive Electrical Systems and Electronics
- Vehicle Dynamics
- Operations Research and Industrial Management
- Ethics in Engineering and Transport Management
- Modern Vehicle Technology
- Robotics and Robot Application
- Off-road Vehicles
- Non-destructive Testing Methods
- Alternative Fuels and Energy Systems
- Entrepreneurship and E-business
- Industrial Engineering