

UPPSC Mines Inspector Prelims Exam Pattern

Subject	Number Of Questions	Number Of Marks
General Study	25	50
General Hindi	25	50
Mining Engineering	100	200
Total	150	300

UPPSC Mines Inspector Mains Exam Pattern

Subject Name	Number Of Questions	Number Of Marks
Mining Engineering <ul style="list-style-type: none">• Question No. 1 will be compulsory & it will also be compulsory to attempt 2 questions for one each section.• It is compulsory to attempt 5 questions.	8	200
Time Duration: 3 Hours		

UPPSC Mines Inspector Syllabus - Topic Wise

UPPSC Mines Inspector Syllabus (Preliminary Exam)

General Study

- General Science (High School Standard)
- History of India
- Indian National Movement
- Indian Polity, Economy & Culture
- Indian Agriculture, Commerce & Trade
- World Geography & Indian Geography & Natural resources of India
- Current National and International Important events
- Logic & Reasoning based on General Intelligence
- Specific knowledge regarding Education, Culture, Agriculture, Industry Trade, Living & Social Traditions of Uttar Pradesh
- Elementary Mathematics up to 8th level:- Arithmetic, Algebra and Geometry
- Ecology and Environment

General Hindi

- Antonyms

- Synonyms
- Idioms & Phrases
- Vocabulary
- Fill in the Blanks
- One Word Substitution
- Comprehension
- Tenses
- Transformation of Sentences
- Active & Passive Voice
- Direct & Indirect Speech

Mining Engineering (Main Examination)

Mining Geology and Economic Geology

- Physical Geology- Constitution of earth's interior, earthquake and volcano, weathering
- Mineralogy-Physical properties of minerals, identification of minerals, Mohs scale of hardness
- Petrology- Basics of igneous, sedimentary and metamorphic rocks
- Structural geology- Dip and strike, folds, faults, joints, joint sets
- Stratigraphy- Geologic time scale, classification of Indian rock formations, fossils and their uses
- Economic geology-Origin of coal, classification of Indian coals, Indian coal deposits, classification of ore deposits, Indian mineral wealth, mineral prospecting, sampling methods

Mine Surveying

- Principles of surveying
- Distance measurement techniques
- Chain surveying
- Computation of area and volume
- Underground surveying principles
- Levelling instrumentation and techniques
- Theodolite-principle, construction, surveying methods
- Superelevation
- Curve fitting
- Correlation surveying

Mining Technology

- Modes of entry to surface and underground mines
- Shaft sinking- methods, shaft lining
- Drilling and blasting-Drilling techniques, cut holes, explosives, detonators, blasting practices, blasting accessories, misfire and its handling
- Methods of mining of coal and metalliferous deposits
- Roof support- Types and techniques, systematic support rules
- Mine lighting-Cap lamp, lamp room, electric lamps, mine lighting techniques

Mine Transport and Machinery

- Opencast and underground mines machineries-characteristic features and applicability
- Transportation systems in opencast and underground mines
- Mine pumps

Rock mechanics and ground control

- Physico-mechanical properties of rocks and their estimation
- Rockmass classification
- Mine subsidence parameters and their significance
- Ground control-Stowing methods
- Pit slope- parameters and stability

Heat and Humidity

- Sources of heat in underground mines
- Terminologies related to humidity
- Dry-bulb and wet-bulb temperatures (DBT and WBT)
- Effect of heat and humidity
- Effect of air velocity

Surface Mine Environment

- Mine noise-Terminology, effects of noise, sources of noise generation and control, noise standards
- Air pollution-Primary/secondary air pollutants, acid rain, global warming, green house effect, ozone layer depletion
- Water pollution-Classification of waste water, biochemical oxygen demand (BOD), chemical oxygen demand (COD)
- Surface mine fires
- Basics of EIA and EMP

Underground Mine Environment and Ventilation

- Mine gases- Properties and detection, mine damps
- Flame safety lamps-Constructional features, safety features, application
- Underground mine fires- Causes, prevention & control, detection of spontaneous heating, incubation period
- Mine explosions-Causes and precautions against firedamp and coal dust explosions, Cowards diagram
- Natural ventilation-Causes, NVP
- Mechanical ventilation-Axial-flow/centrifugal fans, forcing/exhaust fans, auxiliary/booster fans
- Ventilation control devices, air-crossing, volumetric efficiency quotient (VEQ)
- Splitting of air current
- Laws of airflow, air power, mine characteristic curve
- Standards of ventilation
- Ventilation survey-Instrumentation and procedure

Mine Rescue and Recovery

- Mine rescue-Apparatus and operation. Rescue rules
- Mine recovery-Procedure

Mine Legislation and Safety

- Mine legislation-Mines Act, Mines Rules, Coal Mines Regulations
- Workmen's Compensation Act
- Mine safety-Accidents in mines and their prevention. Occupational diseases

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