

**SCHEME AND SYLLABUS FOR RECRUITMENT TO THE POST OF
ASSISTANT DIRECTOR IN A.P. MINING SERVICE**

SCHEME

Bachelor's Degree Standard:

<u>PART-A:</u> Written (Competitive) Examination (Objective Type)			
Paper-I : General Studies & Mental Ability	150 Marks	150 Questions	150 Minutes
Paper-II: Mining Engineering	300 Marks	150 Questions	150 Minutes
<u>PART-B:</u> Interview (Oral Test)			
	50 Marks		

SYLLABUS

GENERAL STUDIES AND MENTAL ABILITY

1. General Science – Contemporary developments in Science and Technology and their implications including matters of every day observation and experience, as may be expected of a well-educated person who has not made a special study of any scientific discipline.
2. Current events of national and international importance.
3. History of India – emphasis will be on broad general understanding of the subject in its social, economic, cultural and political aspects with a focus on AP Indian National Movement.
4. World Geography and Geography of India with a focus on AP.
5. Indian polity and Economy – including the country's political system- rural development – Planning and economic reforms in India.
6. Mental ability – reasoning and inferences.

MINING ENGINEERING

1. GEOLOGY: Structural Geology: Definition and scope. Recognition of faults, folds, joints, unconformities etc., Primary and induced structures, their importance in Mining, Bedding, Lamination, foliation, fracture, Cleat etc., field Geology; importance and scope of field Geology, field techniques, geological mapping. Use of survey equipment.
2. Principles of Stratigraphy.
3. EXPLORATORY DRILLING: Principles, selection of site, lay outs, details of equipment, methods of drilling and their variation, interpretation of bore hole data.
4. EXPLOSIVES AND BLASTING: Classification, types and use of explosives storage and transport. Blasting techniques in UG and open cast mines.
5. SUPPORTS: Objectives, limitations of mine supports, Types of mine supports and systematic timbering.
6. OPENING AND CHOICE OF MINING METHODS: Opening, development of mineral deposits, classification of mining methods, merits, demerits and application. Bord and pillar mining. Long wall mining. Open cast mining and their variations. Design of suitable methodology of mining for specific conditions like thickness, depth, inclination, annual production etc.,
7. METAL MINING: Scope and limitations of U/G mining methods, Classification of U/G metal mining systems and their applications in different conditions.

8. MINE SURVEYING: Principles of surveying. Different methods and their importance. Chain surveying. Compass surveying, theodolite surveying, plane labling, levelling, triangulation, correlation. Astronomical terms and definitions. Mine plans and sections. Regulations pertaining to plans and sections.

9. MINING MACHINERY: Elements of transport system, classification and techno economic indecies. Rope haulage, locomotive haulage, conveyers, Aerial rope ways, trackless haulage, Winding. Drainage and pumping.

10. MINE ENVIRONMENTAL ENGINEERING: Mine air and environment. Natural and mechanical ventilation, Types, design variables, selection, installation and maintenance. Mine fires, explosions and innundations, Rescue and recovery.

11. MINE LIGISLATION AND SAFETY: Regulations pertaining to conservation's, exploitation of mineral deposits. Safety welfare and hygiene of mine workers.

**Sd/-
SECRETARY**