

**ANNEXURE -II
SYLLABUS FOR EXAMINATION FOR FOREMAN'S
CERTIFICATES OF COMPETENCY RESTRICTED TO MINES HAVING
OPENCAST WORKING ONLY**

General Safety and Legislation

Duties and responsibilities of workmen, competent persons and officials (excluding managers, assistant managers); discipline amongst workers and control of staff.

Provisions of the Metalliferous Mines Regulations, 1961, relating to opencast Metal mine working; explosives and Blasting; loading, transportation and dumping; precautions against danger from fire, dust, gas and water and of other provisions and Rules, enforcement of and compliance of provisions under the regulations to which Foreman is responsible.

Writing of reports required to be made by Foreman under the regulations.

Hazard Identification, risk assessment and risk management, safety management plan

Dangerous occurrences in mines and dealing with the same; accidents, their causes and preventions; accident reports; First Aid.

Sanitation and health; miner's diseases, their symptoms and preventions.

Emergency preparedness and response

Accident investigation – why and how?

Methods of Working

Nature of occurrence of ore deposits; geological disturbances and their effects on working conditions; dangers and precautionary measures while approaching geological disturbances areas.

The purpose and utility of boreholes in mines.

Opencast methods of mining; mechanized and manual methods; deep hole drilling and blasting; shovel and dumpers; surface miner; benching; maintenance of haul roads; methods of reclamation; dump stability and dump construction and management;

Safe handling and use of explosives; simultaneous short firing; safety precautions.

Inspection of work place , transport and haul roads and their maintenance.,

Suppression and treatment of mine dust.



Sources of danger from surface water; precaution to prevent inundation and irruption of water; water dams, water danger plans.

Gates and fencing, different kind of fences.

Inspection of opencast workings,

Reading of statutory plans.

Elements of Mining Machinery

Safety aspects and safe use of different kinds of machinery used in opencast mines e.g. blast hole drills, rippers; scrappers; shovels; dumpers; road graders; dozers; wheel loaders; spreaders; surface continuous miners; brakes (including service and parking brakes); safety devices; codes of practices; traffic rules; unsafe practices; Crushers.

Application of electricity in mines; safety precautions.

Different types of pumps; principles and use of siphons; drainage and water lodgments.

Code of practice for transport, erection use and shifting of opencast machinery.

Belt conveyors and safety appliances.

MINING GYAN

