

**ANNEXURE -II
SYLLABUS FOR EXAMINATION FOR OVERMAN'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 Coal Mines Regulations, 2017, relating to opencast Coal mine working; explosives and shotfiring; oading, 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 overman is responsible.

Writing of reports required to be made by overman 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; not disturbing the place of accident.

First Aid.

Sanitation and health; miners' diseases, their symptoms and preventions.

Emergency preparedness and response

Accident investigation – why and how?

Methods of Working

Nature of occurrence of coal seams; 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; blast exclusion zones, shovel and dumpers; dragline; bucket wheel excavators; surface miner; benching; maintenance of haul roads; precautions while extracting developed pillars by opencast method and other safety precautions; methods of reclamation; dump stability and dump construction and management; high wall mining.



Safe handling and use of explosives; simultaneous short firing; blasting in fire areas in opencast mines; safety precautions.

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; draglines; dumpers; road graders; dozers; wheel loaders; bucket wheel excavators; spreaders; surface continuous miners; brakes (including service and parking brakes); safety devices; codes of practices; traffic rules; unsafe practices; use of steam and internal combustion engines in mines; 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

