

PMN7J001 Mine Environmental Engineering and Rescue 3-0-0

Module - I:

Mine gases: properties, physiological effects, occurrence, detection, and monitoring, Sampling and analysis of mine atmosphere

Module - II:

SpontaneousHeating:Causes,incubationperiod,detection,remedialmeasures.MineFires-Classification, causes, preventive measures, dealing with mine fires – direct and indirectmethods, reopeningofscaledoffareas.;Explosion:Fire-dampExplosion-Limitsof inflammability of methane, causesof ignition, nature of fire damp explosion, propagation andprevention.Coal-dustExplosion-Indexofinflammability,factorsaffectingexplosibility ofcoaldust,causesandsafeguards.Propagationofcoaldustexplosions,Investigationafter anexpllosion

Module - III:

Rescueandrecovery:Typesofrescueequipmentandtheiruse,featuresofrescuestations andrescuerooms,firstaidappliances,trainingofpersonnel,andorganizationofrescueand recoveryworkduringminefires,explosion,inundation

Module - IV:

Mine Illumination: Its effects on safety, efficiency and health, Flame and electric safety lamps, theiruses and lamp-room – lay out and organization, standards of illumination in mines, lighting from the mains,photometric illumination survey, Miners' diseases