

Code No: 56088

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, June - 2022

MINE ENVIRONMENTAL ENGINEERING - II

(Mining Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) What are the adverse effects of Spontaneous combustion?
b) Describe in detail the coal oxygen complex theory.
c) What are the intrinsic factors affecting spontaneous combustion of coal? [3+9+3]
- 2.a) What are the major steps involved in the rescue operations?
b) Describe various methods used in reopening of sealed areas in mines. [5+10]
- 3.a) Discuss about Mine explosion –Frictional sparking and electrostatic sparking.
b) Explain in detail, in what circumstances stone dust barriers and Water barriers in mine explosion. [8+7]
- 4.a) What are the health hazards occur due to mine dust?
b) Write a short note on control over ignition sources and control over flammable material. [5+10]
5. Explain in detail the causes, effect and protective measures of mine inundation. [15]
- 6.a) What are the blast associated environmental effects and which factors contribute to blast induced ground vibrations?
b) Write a brief note on Noise source monitoring in mining. [10+5]
- 7.a) What are the standards of illumination in open cast mines?
b) Explain in detail the illumination arrangement of open cast mines.
c) Discuss the lamp room design and significance in mining. [5+6+4]
8. Explain in detail the rescue station, its operations and apparatus used. [15]

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