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## B04-306

Fourth Semester Online Examination, May-June, 2022

### M. Sc. GEOLOGY

#### Paper III

[Mineral Resource Development and Mining Geology]

Time : Three Hours ] [ Maximum Marks : 80

*Note : (i) Part A and B of each question in each Unit consist of very short answer type questions which are to be answered in one or two sentences.*

*(ii) Part C (Short answer type) (Word limit 200-250) and Part D (Long answer type) of each question should be answered within the word limit (400-450 words) mentioned.*

#### UNIT-I

1. (A) Write the full name of the following : 2
- (i) CMPDI
  - (ii) BCCL
  - (iii) KIOCL
  - (iv) MECL

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(B) Define Mineral and Gangue 2

(C) Describe the Act and Rule by giving a relevant example. 4

**Or**

Explain Lease, Lessee, Permit, and License.

(D) Define Chhattisgarh Minor Mineral Rules 2015. 12

**Or**

Describe the salient features of MMDR Act, 1957.

#### UNIT-II

2. (A) Define feasibility axis of UNFC 2

(B) Define MCDR and its importance. 2

(C) Describe the difference between progressive and final mine closure plans. 4

**Or**

Geological axis of UNFC. Write in brief.

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- (D) Write in detail about the protection of environment mentioned in the MCDR. 12

**Or**

Discuss the environmental impact assessment of a coal mine.

**UNIT-III**

3. (A) Define the term trenching. 2  
(B) Describe adits, tunnels and shafts. 2  
(C) Write a note on different types of mine support used in U/G mines. 4

**Or**

Define the subsidence by elaborating the cause and its impact

- (D) Write in detail about the different explosives used in the mining operation. 12

**Or**

Define inundation and its impact on the coal mining by giving suitable case study.

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**UNIT-IV**

4. (A) Define the term white damp. 2  
(B) CMRS stands for. 2  
(C) Write a short note on Mine gases. 4

**Or**

Write a short note on centrifugal fan with neat sketch.

- (D) Discuss the various methods of stopping. 12

**Or**

Define the miner's diseases and dust hazards.

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