

**Scheme - I**  
**Sample Question Paper**

**Program Name: Mining and Mine Surveying/Mine Engineering/Mining Engineering.**

**Program Code : MS/MZ/MN**

**Year : Second**

**22250**

**Subject Title : Method of Working (Coal)**

**Marks : 70**

**Time: 3 Hours**

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**Instructions:**

1. All Questions are Compulsory.
2. Answer each Main Question on a new page.
3. Figures to the right indicate full marks.
4. Mobile Phone or any other Electronic Communication devices are not permissible in Examination Hall.

**Q.1 Attempt any FIVE of the following:**

**(10 Marks)**

- a) Define Stripping Ratio
- b) Define "Incubation Period" of coal seam.
- c) Define "Contiguous Seams".
- d) List the advantageous of Closed panel system of working over open panel system of working.
- e) List the factors affecting length of Long wall Face.
- f) List the advantageous of Long wall Retreating over Long wall advancing.
- g) Name the different theories of subsidence.

**Q.2 Attempt any THREE of the following:**

**(12 Marks)**

- a) Explain the different factors which affect the choice of exploitation of Coal.
- b) State the conditions under which board and pillar method is best suited
- c) Explain the various preparatory arrangements to be done before starting depillaring operation.
- d) Compare stowing with caving.

**Q.3 Attempt any THREE of the following:**

**(12 Marks)**

- a) State the precautions which are to be taken while working contiguous seam working?
- b) ) Compare "Longwall Advancing with Longwall retreating" Method
- c) Compare long wall Top Slicing with long wall sub level caving?
- d) What are the various theories of subsidence? Explain any one of them?

**Q.4 Attempt any THREE of the following:**

**(12 Marks)**

- a) Describe Air Blast and precautions to be taken to avoid it.
- b) Describe the precautions to be taken while working below Waterlogged areas as per CMR2107.
- c) Describe the precautions to be taken while working near restricted areas as per CMR2107.
- d) Compare long wall advancing with long wall retreating
- e) Compare Longwall Single Unit Face with long wall Double Unit Face.

**Q.5 Attempt any TWO of the following:**

**(12 Marks)**

- a) A coal seam is to be developed by using board and pillar method  
Under following conditions

- i) Seam thickness: 5m
- ii) Height of gallery during development: 3m.
- iii) Width of gallery: 4.2m
- iv) Dimension of pillar: 25 m X 25m center to center
- v) Incubation period : one year
- vi) Average out put during depillaring 250 tons per shift
- vii) Specific gravity of coal : 1.4

Calculate

- I) the percentage of extraction during depillaring
- II) Number of pillars in a close panel

- b) A coal seam of 5 meter thickness is to be developed by using SDL and Chain conveyor combination suggest a suitable layout and calculate manpower and OMS .Assume your own conditions
- c) Identify and explain the different Lines Of Goaf by drawing a neat sketch.

**Q.6 Attempt any TWO of the following:**

**(12 Marks)**

- a) A coal seam is to be developed by using DERD suggest a suitable layout and Manpower requirement
- b) Compare cyclic long wall mining with non-cyclic long wall mining.
- c) .Define following terms by drawing a neat sketch
  - i) Angle of draw
  - ii) Limit line
  - iii) Harmless depth
  - iv) Critical area of exaction
  - v) Subsidence basin
  - vi) Full subsidence

**Scheme - I**  
**Sample Test Paper - I**

**Program Name: Mining and Mine Surveying/Mine Engineering/Mining Engineering**

**Program Code : MS/MZ/MN**

**Year : Second**

**22250**

**Subject Title : Method of Working ( Coal )**

**Marks : 20**

**Time: 1 Hour**

**Instructions:**

1. All Questions are Compulsory.
2. Answer each Main Question on a new page.
3. Figures to the right indicate full marks.
4. Mobile Phone or any other Electronic Communication devices are not permissible in Examination Hall.

**Q.1 Attempt any three of the following: ( 06 Marks)**

- a) Define Stripping Ratio
- b) Define "Incubation Period" of coal seam.
- c) List the advantageous and disadvantageous of board and pillar
- d) List the advantageous of Closed panel system of working over open panel system of working.

**Q.2 Attempt any Two of the following: (08 Marks)**

- a) Explain the different factors which affect the choice of exploitation of Coal.
- b) Explain the various preparatory arrangements to be done before starting depillaring operation.
- c) Compare stowing with caving.

**Q.3 Attempt any ONE of the following: (06 Marks)**

- a) A coal seam is to be developed by using board and pillar method  
Under following conditions

- viii) Seam thickness: 5m
- ix) Height of gallery during development: 3m.
- x) Width of gallery: 4.2m
- xi) Dimension of pillar: 25 m X 25m center to center
- xii) Incubation period : one year
- xiii) Average out put during depillaring 250 tons per shift
- xiv) Specific gravity of coal : 1.4

Calculate

I)the percentage of extraction during depillaring

- b) A coal seam of 5 meter thickness is to be developed by using SDL and Chain conveyor combination suggest a suitable layout and calculate manpower and OMS .Assume your own conditions
- c) Identify and explain the different Lines Of Goaf by drawing a neat sketch.