

# EXAMINER'S REPORT

## Mining engineering manager of underground coal mines certificate of competence

2019

### Written examination

#### Summary of results and general comments

Examination date:	25 & 26 June 2019
Number candidates:	20
Number who passed:	15
Highest overall mark:	75.5%
Average overall mark:	66%
Lowest overall mark:	49%

#### MB1 – Mining Legislation

##### Summary of results and general comments

Exam Date:	25 June 2019
Number of Candidates:	16
Number who passed:	12
Highest mark:	84.5%
Average mark:	68%
Lowest mark:	38.5%

**Question 1 (total of 20 marks)**

Highest mark: 17

Average mark: 13

Lowest mark: 5

**Examiner's comments**

- a) Don't just state "active Emergency Response", what needs to be done? eg: people, power, ventilation & pumping.
- b) Clause 179 (a)(ix) Inrush - there would have been people on the bolting platforms of a Development C/M. They would have been at risk.
- c) There would have been a "Hole Through" procedure in place. How did this fail?

**Question 2 (total of 20 marks)**

Highest mark: 18

Average mark: 12

Lowest mark: 6

**Examiner's comments**

- a) Contractor Management & Fatigue Management

**Question 3 (total of 20 marks)**

Highest mark: 18

Average mark: 14

Lowest mark: 3

**Examiner's comments**

- a) This question or similar is asked in the Undermanager's & Deputy's exams.
- b) As the MEM, not only do you need to know clauses 178, 179 & 128, but you must have a system in place that ensures all your supervisors know this as well. eg: a list on the incident form, a laminated copy in statutory report books, training & assessment.

**Question 4 (total of 20 marks)**

Highest mark: 18

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Average mark: 15

Lowest mark: 11

### Examiner's comments

- a) Need to understand "Shotfiring" requirements for both UG & OC

### Question 5 (total of 20 marks)

Highest mark: 18

Average mark 14

Lowest mark: 7

### Examiner's comments

- a) HRAs are something every MEM will deal with. This is a very common question for both Legislation & CMP exams.

## MB2 - Mine ventilation

### Summary of results and general comments

Exam date: 25 June 2019

Number of candidates: 17

Number who passed: 15

Highest mark: 81%

Average mark : 68%

Lowest mark: 52.5%

### Question 1 (total 100 marks)

Highest mark: 70

Average mark: 53

Lowest mark: 36

### Examiner's comments

Candidates should identify the underlying problems with the mine plan. They should then identify what are the consequences of the problems identified such as low airflow, high leakage, potential for spontaneous combustion. The candidates should then identify long term solutions and immediate solutions to the problems.

### **Question 2 (total 100 marks)**

Highest mark:	92
Average mark:	83
Lowest mark:	68

#### **Examiner's comments**

Candidates generally answered calculation questions well.

Candidates should determine what air quantities could be reasonably achieved with the layout in front of them.

Some mine plans could have been more clearly marked up. There were some plans that in some areas were not practical or workable in terms of ventilation layout with conveyors and transport roads.

## **MB3 – Coal mining practices**

### **Summary of results and general comments**

Exam date:	26 June 2019
Number of candidates:	14
Number who passed:	11
Highest mark:	76.5%
Average mark:	60.5%
Lowest mark:	43.5%

### **Section A - Underground coal mining**

Candidates were to choose four of the six following questions.

#### **Question 1 (total 20 marks)**

Highest mark: 16

Average mark: 12

Lowest mark: 9

### Examiner's comments

- a) Think about options that will work for the remainder of the recovery. Not just another goaf fall.
- b) Think about effects on the "whole of mine" & availability of gear as well as the LW.
- c) Have a system in place for this type of assessment. eg: SWOT – Strengths, Weaknesses, Opportunities & Threats.

### Question 2 (total 20 marks)

Highest mark: 14

Average mark: 11

Lowest mark: 7

### Examiner's comments

- a) Don't assume this is a Gateroad with only 2 Hdgs.
- b) Could the cache be moved across the road to the other side of the travel road (primary egress) & the "Life Line" be rerouted to suit?
- c) Why are you having so many roof falls? As the MEM what are you putting in place to stop this?

### Question 3 (total 20 marks)

Highest mark: 17

Average mark: 13

Lowest mark: 10

### Examiner's comments

- a) Another HRA question. Your answer is basically the requirements.

### Question 4 (total 20 marks)

Highest mark: 13

Average mark: 10

Lowest mark: 6

### Examiner's comments

- a) Too many candidates only considered the impact of the seam above & didn't address the new seam's issues. eg: Gassy, Spon Com, Undulating & Water.
- b) What are the "Controls" for each "Hazard"?

### Question 5 (total 20 marks)

Highest mark:	16
Average mark:	12
Lowest mark:	6

### Examiner's comments

- a) Think of the issues, practicability & cost for each option in (a) (b) & (c)
- b) Part (d) requires a "walkout" along the "2<sup>nd</sup> Egress", not the "Primary" taking into account the condition of the roadway, obstacles & grades that will be encountered.

### Question 6 (total 20 marks)

Highest mark:	18
Average mark:	13
Lowest mark:	6

### Examiner's comments

- a) What is involved in extinguishing a "Gas Ignition" at the face?
- b) "Frictional Ignition Zone". What are the "Controls"?

## Section B - Surface coal mining

Candidates were to choose one of the following questions.

### Question 7 (total 20 marks)

Highest mark:	16
Average mark:	12
Lowest mark:	9

### Examiner's comments

- a) Very few candidates responded to the EPA (also public) issues.
- b) Review an OC "Spon Com" plan
- c) What immediate actions are required? eg: Stop all other work in that area. Don't expose others. Get some gas monitoring done asap (under the same wind / time conditions)

### Question 8 (total 20 marks)

Highest mark:	17
Average mark:	13
Lowest mark:	11

#### Examiner's comments

- a) Get a copy of a Risk assessment for a surface stockpile draw point.
- b) Get a copy of the Emergency Response Plan for this event.

## Post Oral examination

Date:	5 March 2019
Number of candidates:	0
Number deemed competent:	0

## Oral examination

Date:	21 & 22 August 2019
Number of candidates:	14
Number deemed competent:	10

#### General comments

- a) Candidates were generally well prepared and presented their answers in a structured and methodical manner.
- b) Some candidates tried to over complicate the scenario and "lost their way" through answering the scenarios presented. Candidates should fully understand the problem prior to solving the issue.

## More information

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## Acknowledgments

Mining engineering manager of underground coal mines examination panel

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