

EXAMINER'S REPORT

Certificate of competence

Mechanical engineer of coal mines other than underground mines

September 2020 – June 2021

Written examination

CME3 – Safety and mining legislation applicable to surface coal mines

Summary of results and general comments

Examination date:	24 September 2020
Number candidates:	8
Number who passed:	4
Highest overall mark:	68.83%
Average overall mark:	58.02 %
Lowest overall mark:	43.05%

General Comments

Candidates generally performed satisfactorily, and although four candidates were deemed competent, a fifth was only just short of passing. However, two candidates scored less than 50%. Some candidates struggled with the practical application of concepts introduced in the exam questions, which indicates these candidates still lack suitable experience across all aspects of the role.

Mechanical Practices questions 4, 5, and especially 6, were not managed well by candidates.

Question 1 (total of 50 marks)

Highest mark: 45

Average mark: 34.5

Lowest mark: 21

Examiner's comments

The question on Work Health and Safety Regulations had two parts, the major part relating to falls, and the second part covering noise exposure.

Candidates generally answered the question satisfactorily.

Question 2 (total of 50 marks)

Highest mark : 40

Average mark: 34

Lowest mark: 17

Examiner's comments

The question relates to the Mechanical Engineering Control Plan (MECP). Candidates generally answered part B of the question satisfactorily however, Part A indicated a lack of knowledge of the function of the MECP.

Question 3 (total of 50 marks)

Highest mark: 47

Average mark: 33

Lowest mark: 22

Examiner's comments

Fill in the blanks question relating to maintenance of control measures, notification of incidents, and what constitutes serious illness or injury. Candidates generally answered the question satisfactorily but had a limited knowledge of the notification requirements for respirable dust and crystalline silica.

Question 4 (total of 50 marks)

Highest mark: 40

Average mark: 28.63

Lowest mark: 13

Examiner's comments

This question challenged the candidates understanding of belt conveyors. Candidates answered some sections of the question satisfactorily but lacked understanding of how a tripper drive and belt loop take up worked.

Question 5 (total of 50 marks)

Highest mark: 36
Average mark: 28.56
Lowest mark: 24

Examiner's comments

This question related to recommissioning a coal bin. Candidate answers were okay but lacked detailed knowledge of managing the process.

Question 6 (total of 50 marks)

Highest mark: 40
Average mark: 15.38
Lowest mark: 0

Examiner's comments

The question examined the process of changing a hoist rope on a dragline. Candidates lacked fundamental knowledge of which rope is a hoist rope. They had a poor understanding of the changeout process and lacked understanding of the difference between a process and a hazard.

Oral examination

Date: 28th to 30th October 2020

Number of candidates: 4

Number deemed competent: 0

General comments

Although no candidates were deemed competent, one candidate was only a few marks from passing.

Question topics included:

- Incident management scenario
- Contract management

■ Incident review

Candidates need to develop a structured approach to provide logical and comprehensive answers that indicate they are managing issues. The answer should consider areas such as people, equipment, environment, processes, and organisational. The Nertney Wheel, Ishikawa, ICAM, and PEEPO are examples of systematic structured approaches.

Candidates were often too focussed on machine critical systems. They lost focus on the fact that these systems are designed to protect people, and not necessarily the plant.

Post Oral examination

Date: 2nd June 2021

Number of candidates: 3

Number deemed competent: 1

General comments

Question topics included:

- Incident investigation scenario
- Legacy plant
- Non destructive testing

Candidates need to provide logical and comprehensive answers that demonstrate they are identifying the hazards, managing the energies, and implement effective controls.

Answers need to reflect the understanding and actions of a statutory Mechanical Engineer.

Overall comments for all exams

Unsuccessful candidates generally lacked the understanding or experience of the role of the statutory Mechanical Engineer.

More information

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Acknowledgments

Mechanical engineer of coal mines examination panel

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