

Mining engineering manager of underground coal mines

Examiners' report November 2017

Written examination

Summary of results and general comments

Examination date:	4+5 May 2017
Number candidates:	13
Number who passed:	6
Highest overall mark:	78%
Average overall mark:	63%
Lowest overall mark:	44%

Mining legislation paper (total 100 marks)

Highest mark:	68%
Average mark:	52%
Lowest mark:	23%

General comments

Questions in this paper were answered reasonably well but:

- Think about topical statutory / legislative issues
- Study the acts & regulations
- Question 2 was answered poorly. This scenario is the manager's responsibility.

Ventilation paper (total 200 marks)

Highest mark:	86%
Average mark:	66%
Lowest mark:	31%

General comments

This paper was answered reasonably well however:

- Q1: Think about how controls for one hazard may affect another hazard.
- Q2: Consider what development production is required to match longwall retreat. For example; if the longwall retreats 1 pillar per week, gate road development must advance 1 pillar per week. Main headings must advance 1 longwall block width in the time it takes the longwall to retreat the block.
- Q2: Consider what ventilation quantities are required to match the hazards identified.

Practical mining paper (total 100 marks)

Highest mark: 79%

Average mark: 66%

Lowest mark: 53%

General comments

This paper was answered reasonably well but:

- Q1: Attempted 2/5. Avg Mark: 16.

Candidates still need to show an understanding of pillar extraction, even though it's not common practice.

- Q2: Attempted 3/5. Avg Mark: 13.

Candidates need to show an understanding of the hazards and control measures for place change (Cut / Flit) mining need to be understood.

- Q3: Attempted 5/5. Avg Mark: 13.

Candidates need to show an understanding of how incidents are reported and dealt with and how you, as the manager, ensure standards and compliance to those standards.

- Q4: Attempted 3/5. Avg Mark: 12.

Development: Common issues that should be considered in the scenario include: water issues when mining down dip; soft roof and floor in dyke; angle of dyke, and the possible effect on the size of the pillar.

Longwall: Common issues that should be considered in the scenario include: The performance of roof supports due to soft roof and floor; the period of time it will take for the longwall to mine through the dyke; the affect the dyke material and water may have on the belt system and coal handling and preparation plant. Further, considerations for alternate options to avoid mine through the dyke such as stepping around the dyke; and the potential impact the dyke on the tailgate of the next longwall.

→ Q5: Attempted 2/5. Avg Mark: 13.

This subject has been topical yet only two (2) candidates attempted the question. Candidates need to understand what issues the mining industry are dealing with. Information is available from the Department's website on incidents, investigations and safety alerts/bulletins (eNewsletters).

→ Q6: Attempted 5/5. Avg Mark: 11.

This was answered poorly. Candidates must understand each statutory official's role. The deputy is concerned with the recovery of the fall, as per the procedures that have been developed, along with the other roadway in the deputy's panel. The undermanager is concerned with the potential effect on the longwall retreat and the other development panels that may encounter the same strata issues. The manager's concern is "how has the strata management plan failed?" and "What needs to be done to ensure an event of this nature doesn't happen again?".

→ Q7: Attempted 2/5. Avg Mark: 12.

Respirable dust is very topical. Candidates should know the universally accepted control measures and how to achieve compliance.

→ Q8: Attempted 3/5. Avg Mark: 14.

Candidates should understand the processes used at a mine site to ensure safety bulletins are reviewed and whether the recommendations are relevant to the mine site. Q: Why is this so important for a manager to get right? A: Truck rollovers & mobile plant fires are way too common. You must know the hazards and the appropriate control measures.

→ Candidates should focus all answers on the responsibilities and hence the role of the mining engineering manager (mine manager).

Oral examination

Date:	29+30 June 2017
Number of candidates:	10
Number deemed competent:	5

General comments

Candidates should consider the following:

- Review questions from the written or previous orals that you answered poorly.
- When answering a question always remember: "I am the manager". Answer the question as the manager. Not the undermanager, technical services manager or any other role.
- Know what is happening / topical in the industry & what the controls are.
- Keep a record of what you have done to prepare for your oral and bring a copy with you.
- Listen to the question. Think about your answer before speaking. Listen to the examiners. They are not trying to catch you out. Think of examples that support your answer.

- Your “associated non-technical skills” (ANTS) will be assessed. Communication, situation awareness, leadership, decision making and teamwork. Information can be found on the Department’s website.
- Know what TARP stands for, how they are developed and why they are developed.
- Being nervous can happen, but you must be able to demonstrate that you are competent and confident in the responsibilities of a mine manager.
- You have a supporting team around you at the mine (senior staff & supervisors). Think about how they can support you.
- What standards & compliance will you as a manager accept? How do you achieve these standards & compliance while still achieving production targets?

More information

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Acknowledgments

Mining engineering manager underground coal mines examination panel.

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CM9 reference: PUB18/63