

CERTIFICATE OF COMPETENCE | EXAMINERS REPORT

Undermanager of underground coal mines

Summary of results and general comments

Written Examination

Examination Date: 1 April 2016
Number who passed: 5 out of 19
Highest mark obtained 87%
Average overall mark: 58%
Lowest overall mark: 22%

UB1 – Mining Legislation

Highest mark obtained: 87%
Average mark: 51.24%
Lowest mark: 22%

Comments

- With respect to question 5 of the legislation exam, which on the whole was answered quite poorly, many candidates provided answers related to Clause 88 (Duty to prepare) rather than Clause 89 (consultation in preparation) of an Emergency Plan. Also, some candidates provided unrelated information on Self Rescuer training and testing of sealing arrangements.
- Most candidates accurately answered the contents of Clause 5 Meaning of principal mining hazard Work Health and Safety (Mines) Regulation 2014
- Many candidates were unable to accurately reflect the contents of Clause 14 Contents of safety management system Work Health and Safety (Mines) Regulation 2014. This Clause provides the key framework for most safety related management controls as specified in legislation.
- Most candidates answered the question regarding duty of care requirements under Work Health and Safety Act.
- Question 4 was poorly answered. Answers included references to other clauses or previous versions of legislation. This clause defines air quality specifying minimum oxygen, dust and diesel emissions.

UB2 – Mine Ventilation

Highest mark obtained: 78.5%

Average mark: 57.68%

Lowest mark: 39%

Comments

- A number of candidates continued to rely heavily on 'rules of thumb' or use assumptions that are not explained or justified. It is important that each candidate should briefly explain why their assumptions are appropriate for the ventilation question.
- Question 1 was generally answered well, which indicates candidates are putting an appropriate amount of effort into preparation for this part of the paper. Fewer candidates achieved good results from answering Question 2.
- Unfortunately many candidates provided limited information in their answers making it difficult to determine the level of knowledge. This is reflected on some candidates marks.
- Once again Question 2 made reference to the management systems in place to manage risks associated with ventilating the mine. Candidates are encouraged to approach questions such as this from the perspective of, what aspects will need to be included in the relevant management systems.
- The candidates who obtained good marks in the ventilation paper provided answers from the perspective of an undermanager, who could identify the potential hazards associated with the ventilation arrangements and provide specific measures to control the risks from those hazards. Answers need to reflect the hazards, risks and control measures relative to the mine plan and mine operation description provided in Question 1.
- Question 2 C was generally answered well across the group. Knowledge of gas management controls appears to be good with most candidates.
- The knowledge of spontaneous combustion controls was generally good. But a number of candidates failed to identify the need to confirm the accuracy of gas readings before triggering TARPS.
- A number of candidates did not answer question 2 B at all, or the answer did not reflect the question. Candidates are reminded to read the question carefully to ensure that they provide answers which reflect the mine plan and details provided in the question.
- The current format of the ventilation paper is consistent with previous papers. Candidates are required to provide an explanation of their understanding of ventilation principles in relation to the data and other details provided in the exam.

UB3 – Coal Mining Practice

Highest mark obtained: 80%

Average mark: 63.8%

Lowest mark: 54%

Comments

- With respect to question 7 of the Coal Mining Practice exam, some candidates provided a well structured and managed approach to controlling the emergency situation. Shortfalls included some candidates travelling to the incident site prior to taking any actions, and some focussed too heavily on the investigation aspects of the situation rather than managing the crisis at hand. Very few candidates recognised ‘crush’ injury treatment.
- In general, question 8 of the Coal Mining Practice exam was answered quite well. Most candidates used a management model process to address the matter although some candidates focussed too heavily on hardware rather than process. Some candidates missed mapping the old workings area and engagement of relevant expertise. Most candidates recognised the need for training but some missed the consultation phase of the process.
- Power Supply Failure - Most candidates were able to provide an appropriate emergency response, however, not all candidates were able to effectively describe the interaction between the surface activities and the underground recovery activities required in this question.
- Frictional Ignition Question - Most candidates had a good understanding of the frictional ignition hazard and its methods for control
- Windblast Question - Most candidates had a good working knowledge of the Windblast Hazard and the control implemented. An important part of an Undermanager's role is to ensure all employees receive adequate information and consultation in accordance with legislative requirements.
- Longwall roof fall– Candidates answered the question appropriately. Risk assessment and planning tools/ processes were used to scope and manage response.
- Underground fire – For this scenario, some candidates initiated emergency management practices rather than initiating investigation for sources of smoke. Expectations on requirements to fight the fire were well understood.
- Spontaneous Combustion – Process of spontaneous combustion was well understood. There was limited reference to use of Spontaneous combustion TARP for guidance to manage the scenario. Evacuation was initiated rapidly in some cases, and confirmation of results was not initiate by many candidates.

Oral examination

Examination Date: 26 May 2016

Number who sat: 9

Number of candidates deemed competent: 7

Comments

- Pleasing success rate for the oral examination.
- The examiners wish to remind candidates to review their weaknesses from written exams and/or previous oral examinations and ensure they are fully across the detail before their oral examination. Examiners wish to see that an Undermanager candidate would follow up on any weaknesses rather than just accept them.
- Candidates generally understood the legislated obligations with respect to notification of incidents when scenarios were put to them.
- Candidates demonstrated a wide range of competency in the management of significant incidents, particularly complex incidents which incorporate several issues at the same time. Candidates are reminded of the need to follow a structured approach in identifying and addressing the hazards, also the need to take control of the situation.
- Candidates generally demonstrated sound competency in subjects of frictional ignition, windblast, spontaneous combustion, legislation framework, and the use of explosives in coal mines.
- The need for benchmarking mines across the state has always been an important aspect of a candidate's preparation for their undermanager's exam. A candidate should approach the task of benchmarking from the perspective of identifying the major coal mining hazards and visiting those operations which provide an opportunity to learn how those hazards are managed.
- It is common for candidates to approach scenario questions in an oral exam from the perspective of a deputy or their normal role. Each answer provided needs to be from the perspective of an undermanager. By doing this the candidate can more readily demonstrate his/her knowledge, both technical and practical.
- Candidates are reminded that the Undermanager's role is an operational role requiring a structured management approach which incorporates practical mining solutions. The importance of this holistic approach to the role cannot be overstated.

More information

The Mining Competence Team, Business Processes and Authorisations

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Acknowledgments

The Undermanager Examination Panel

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