

April 2023

Examiners' report

Deputy of underground coal mines certificate of competence

Examiners' report 2022

Written examination

DEP – Coal mining practice and legislation

Summary of results and general comments

Exam date: 18 May 2022

Number of candidates: 45

Number who passed: 38

Highest mark: 87%

Average mark: 74.8%

Lowest mark: 39.75%

Question 1 (total of 10 marks)

Highest mark: 10

Average mark: 7.3

Lowest mark: 3.5

Examiners' comments:

- a) Ventilation survey: Cross sectional area – width x height = area. Traverse roadway for 60 secs x 2 for velocity and take the average. Quantity = area x velocity in m³/sec
- b) Complete the calculation.
- c) Relative density of common mine gases. Know your gas chart.
- d) Calculation for minimum quantity for a diesel machine. Quantity = 80Kw x 0.06 m³/sec

Question 2 (total of 10 marks)

Highest mark: 10

Average mark: 8.5

Lowest mark: 3.5

Examiners' comments:

- a) Hazardous Zone – WHS(M&PS) Regs 2022 - Schedule 15 – Dictionary (section 3).
- b) Arcing in a Hazardous Zone – Notifiable Incident – section 124 (5)(h).

Incident investigation: Photos, witness statements, Incident report, root cause & corrective / preventive actions.

Question 3 (total of 10 marks)

Highest mark: 9

Average mark: 6.5

Lowest mark: 4

Examiners' comments:

2 Heading Development gate road panel – Production area inspections

- a) Auxiliary Fan – WHS(M&PS) Regs 2022 – section 62 (2)(d)&(f), section 65(3)(l).
- b) Cutting Face – WHS(M&PS) Regs 2022 – section 88 (5).

Question 4 (total of 10 marks)

Highest mark: 10

Average mark: 5.9

Lowest mark: 2.5

Examiners' comments:

WHS(M&PS) Regs 2022 – Inspection Plan – section 88.

Question 5 (total of 10 marks)

Highest mark: 10

Average mark: 6.4

Lowest mark: 2

Examiners' comments:

Continuous miner intersects gas drainage hole. General body 1.8% CH₄ at drill rigs.

- Ensure power is removed if not tripped – greater than 1.25% CH₄.
- Notifiable Incident – WHS(M&PS) Regs 2022 – section 190 (1)(c) – Uncontrolled escape of gas. May also be Section 128 (5)(b) – greater than 2% CH₄ general body.
- Follow the procedure for closing / bagging bore holes.
- Remove people from face.
- Take witness statements, do a sketch of how face was.
- Make place safe: extend vent tubes to face, set up a venturi & monitor gas levels.
- Barricade the area until told scene is released.
- Record on statutory report & fill out an incident report.
- Was the borehole on the ATM & /or in the correctly predicted location?

Question 6 (total of 10 marks)

Highest mark: 10

Average mark: 7.3

Lowest mark: 2

Examiners' comments:

Deputy in production panel where the last 15m of strata roof support is not compliant.

a) Action:

- Inform UM
- Pull C/Miner back & re-support as per the support rules for the relevant TARP level.
- Complete an Incident report
- Record on Statutory Report

b) Communication:

- To entire workforce, including a re-enforcement of compliance
- Verbal and written handover to oncoming shift.
- Crew responsible to be asked why

Question 7 (total of 10 marks)

Highest mark: 10

Average mark: 8.4

Lowest mark: 4.25

Examiners' comments:

Gas Chart – Must Know.

Question 8 (total of 10 marks)

Highest mark: 10

Average mark: 8.0

Lowest mark: 5

Examiners' comments:

Notifiable Incidents: Section 190 – Dangerous Incidents, Section 189 – Serious Injury & Section 124 – Certain Incidents.

Question 9 (total of 10 marks)

Highest mark: 9.5

Average mark: 4.8

Lowest mark: 1

Examiners' comments:

Deputy in panel doing an extended driveage 240m with 2 x S/Cars.

- Most S/Car cables / cable reels will only take approx. 180m.
- Therefore you will need to 'back spool'.
- There should be a procedure for 'back spooling'.
- Procedure will include: surge point, Spotter, cleaning of surge point, where both S/Cars are to be anchored for each sequence.

Question 10 (total of 10 marks)

Highest mark: 8

Average mark: 6.7

Lowest mark: 3

Examiners' comments:

Deputy in Longwall panel with "Contractors" building a goaf seal.

- a) Discussions & checks prior: procedure signed by all, knowledge of mine & the emergency escape, training in task, UG knowledge.
- b) Excessive dust: ensure loading is done as per procedure (correct position), ventilation is to the correct standard (brattice wing in place).
- c) Legal limits – Dust: WHS(M&PS) Regs 2022 – section 41 (b).

Oral examination

Date: 27 July 2022 & 28 July 2022

Number of candidates: 66

Number deemed competent: 30

Post oral examination

Date: 1 Dec 2022

Number of candidates: 33

Number deemed competent: 12

Examiners' comments:

Considerations – as per the briefing session

- Know poorly answered written exam questions
- Being able to answer the question as a Deputy – this is essential.
- An emergency question – call the "emergency", take control, account for workforce (including all contractors), follow your "emergency" training & talk "emergency talk (primary egress / secondary egress, CABA, rescuers, non-verbal communication), delegate, communicate with crew & CRO, preserve the scene, witness statements, photos, incident investigation, incident report, EAP, debrief.
- A ventilation question – de-gassing with brattice or an auxiliary fan. Recirculation (causes, how to identify & remedy), water gauge & Barometric pressure.
- Know your mine.
- Do pit visits to mine's that have a type of mining or hazard that you're not familiar with. Know the role of the Deputy at that mine.

More information

Regional NSW

Resources Regulator

Mining Competence Team

T: 1300 814 609 (Options 2 > Options 3)

Email: mca@regional.nsw.gov.au

Acknowledgments

Deputy of underground coal mines certificate of competence examination panel

© State of New South Wales through Regional NSW 2023. The information contained in this publication is based on knowledge and understanding at the time of writing March 2023. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Regional NSW or the user's independent adviser.