

New South Wales

Board of Surveying and Spatial Information

MINING LAW ASSESSMENT

MINING SURVEYING

Surveying and Spatial Information Act 2002

(Mining Legislation)

Wednesday 25th September 2013

All questions to be answered

Duration 2 Hours

Question 1 (50 Marks)

1. Sketch the following symbols as defined in AS4368 Mine Plans – Preparation and Symbols.
 - a. Gas sampling location
 - b. Surface magazine
 - c. County boundary
 - d. Surface bench mark
2. AS2397 Safe use of lasers in the building and construction industry states the qualifications for a laser safety officer. What are they?
3. AS2397 Safe use of lasers in the building and construction industry states defines the conditions of use for a class 3A laser. What are they?
4. What are the required Qualifications for registration as a mining surveyor under the Surveying and Spatial Information Regulation 2012?
5. Give an overview of SCIMS Class as described in the Surveyor General's Direction 12?
6. What are the 3 inherent systematic errors EDM instruments have as stated in the Surveyors Generals Direction No.5?
7. In accordance with the Surveying and Spatial Information Regulation 2012 who may lodge a complaint with the Board in relation to the conduct of a surveyor?
8. What is the Application of Regulation for the Surveying and Spatial Information Regulation 2012?
9. What is the definition of **Certification** as described in the Survey and Drafting Directions for Mining Surveyors 2008?
10. Mine Workings Plans at a Metalliferous mine must show adjacent workings to within what distance?
11. What information does a Surveyor at a Metalliferous Mine need to record on the CD-R submitted to the Director General?
12. What does the S&DD for Mining Surveyors state about the correlation between Surface and Underground surveys at a metal mine?

13. What is the definition of an **abandoned** mine as described in the SDD for Mine Surveyors 2013?
14. What are the 6 themes stated in the SDD for Mine Surveyors 2013 that are required to be shown in an underground mine Seam Workings Plan?
15. Describe the 3 points the SDD for Mine Surveyors 2013 that are required regarding the preparation of the Mine Workings Spatial Information as a digital file?
16. List three objects of the Mine Health and Safety Act 2004.
17. Define Mining Survey.
18. Define formal survey plan.
19. Briefly describe a surveyor's power of entry rights.
20. List three functions of BOSSI
21. From the Guideline for Archival Research list 2 web based tools
22. From the Guideline for Archival Research list 2 other sources of information suggested.
23. Describe the 3 levels of accuracy detailed in the Guideline for Archival Research.
24. List 4 core attributes to be attached to an element of void point detail.
25. List 4 metadata attributes to be attached to second workings elements.
26. Describe the Accuracy Attribute definition application in a metadata statement.
27. List three areas where a barrier must be left, as specified by the Coal Mine Health and Safety Act 2002.
28. What is the specified width of a barrier referred to in the above question
29. Under the Coal Mine Health & Safety Regulation what are the duties of a mining surveyor?
30. Under the Coal Mine Health & Safety Regulation if the bord and pillar system of mining is used in an underground coal Mine, what is the minimum allowable pillar dimension?

31. Under the Coal Mine Health & Safety Regulation what is the Duty of an operator when they cease to operate a coal operation, in relation to Mine Workings Plans?
32. Name three plans required by the Coal Mine Health and Safety Regulation 2006, for an underground Mine and how often shall they be updated?

Question 2 (10 marks)

You are the Nominated Mine Surveyor at a metalliferous open cut mine who are seeking approval to expand with an underground mine. The proposed underground mine will cover an area that was mined for copper in the 1860's and a shaft is still visible and full of water.

What steps would you need to take regarding the archival research of any previous mining in the area?

Also what are responsibilities of the operator and mining surveyor regarding the control of Inrush as described in the Mine Health and Safety Regulations 2007?

Question 3 (10 marks)

With reference to ICSM publication, *Standards and Practices for Control Surveys* (SP1) outline the minimally accepted practices, equipment and reduction methods that should be used for a Control Survey of an underground coal mine.

Question 4 (10 Marks)

The Mining Act 1992 has the power to grant mining tenure in the form of Exploration Licences, Assessment Leases and Mining Leases.

- A. Detail the mining rights granted by Exploration Licences, Assessment Leases and Mining Leases.
- B. Detail the term for Exploration Licences, Assessment Leases and Mining Leases.

Question 5 (10 Marks)

You are the Registered Mining Surveyor for an open cut coal mine.

Your operation and a neighbouring operation have a registered agreement to allow whoever is able at any given time to mine the barrier pillar to an agreed level.

When the agreement was registered, your operation has a mining lease that did not include surface rights to the entire common boundary.

The neighbouring operation has completed mining leaving their required barrier pillar but has indicated they would agree to allow your operation to complete the full extraction of the remaining barrier pillar.

What would be the required mining tenure, consents and approvals for this to happen and give a general description of each process?

Question 6 (10 Marks)

You are the surveyor at an open cut metalliferous mine.

The mine is proposing an extension to the material handling and processing plant.

The extension will include a new building with bored piers, conveyor installation and an electrical control room.

You have been instructed to look after the survey requirements for the extension.

Detail your requirements under the Work Health and Safety legislation and how you would go about meeting these requirements to provide the surveys required?