

New South Wales

**Board of Surveying and Spatial Information**

# **MINING LAW ASSESSMENT**

## **MINING SURVEYING**

### **Surveying and Spatial Information Act 2002**

(Mining Legislation)

Wednesday 25<sup>th</sup> February 2015

**All questions to be answered**

Duration 2 Hours

Pass Mark of 60% Required

1. As stated in AS4368 Mine Plans – Preparation and Symbols what is the conventional colour to be used for conveyors?
2. Sketch the symbol for each of the features described below, as defined in AS4368 Mine Plans – Preparation and Symbols.
  - a. Telephone
  - b. Fire Extinguisher
  - c. Floor RL, underground
  - d. State survey mark
3. As stated in the Coal Mine Health and Safety Act 2002 who must prepare a Contractor Safety Management Plan if contractors are proposed to be used at the coal operation?
4. List three items a Safe Work Method Statement must address in accordance with the Coal Mine Health and Safety Act 2002.
5. Definition **Inrush** as described in the Coal Mine Health and Safety Regulation 2006?
6. Who must put in place arrangements for preparation and retention of up to date plan at an operation as described in the Coal Mine Health and Safety Regulation 2006?
7. Name the duties of a Nominated Mine Surveyor as described in the Coal Mine Health and Safety Regulation 2006?
8. What is the meaning of **Emergency** as described in the Mine Health & Safety Act 2004?
9. When must the operator of a mine review and test the **Emergency Plan** as described in the Mine Health & Safety Act 2004?
10. Define a **formal mining survey plan** as described in the Surveying and Spatial Information Act 2002?
11. What rights does a registered Surveyor have regarding **entry to land** as described in the Surveying and Spatial Information Act 2002?
12. In what manner must the **power of entry** be exercised as described in the Surveying and Spatial Information Act 2002?
13. In relation to damage to land through exercising power of entry what does the Surveying and Spatial Information Act 2002 state?
14. Define **student of surveying** as described in the Surveying and Spatial Information Regulation 2012?

15. Define **surveyor's assistant** as described in the Surveying and Spatial Information Regulation 2012?
16. Define the **application of the regulation** as described in the Surveying and Spatial Information Regulation 2012?
17. In accordance with Surveyor General's Direction 1 describe a Type 1 permanent mark?
18. In accordance with Surveyor General's Direction 2 name four items to be shown on a locality sketch for Control Survey Mark in a Rural Area?
19. What is a **Level 1 Mine** as described in ESG3?
20. List 4 Primary Domains (Operational) for use in Mining Operations Plan under the ESG3 Guideline.
21. List 4 Secondary Domains (Post Mining Land Use) for use in Mining Operations Plan under the ESG3 Guideline.
22. Name the file format required for a Metadata Statement as specified for either a coal or metalliferous mine spatial submission.
23. List two of the five options that are allowed for the Accuracy Attribute in a Metadata Statement for either a coal or metalliferous mine spatial submission.
24. Name and describe two of the three compulsory files that make a shape file for either a coal or metalliferous mine spatial submission
25. Describe the liability of a Nominated Mining Surveyor as stated in the Survey and Drafting Directions for Mine Surveyors 2013, Amendments 2014?
26. Define **Certification** in accordance with the Survey and Drafting Directions for Mine Surveyors 2013, Amendments 2014?
27. What are four types of surveys that records must be kept for at a survey office of a mine as described in Survey and Drafting Directions for Mine Surveyors 2013, Amendments 2014?
28. What are the obligations regarding updating the Mine Workings Plans as described in Survey and Drafting Directions for Mine Surveyors 2013, Amendments 2014?
29. Define **Adit** in accordance with the Survey and Drafting Directions for Mining Surveyors 2008, Amendments 2014?

30. Define **Metadata** in accordance with the Survey and Drafting Directions for Mining Surveyors 2008, Amendments 2014?
31. What information is required to be recorded on the label of the CD-R containing the Mine Workings Spatial Information in accordance with the Survey and Drafting Directions for Mining Surveyors 2008, Amendments 2014?

## Question 2 (10 Marks)

You have been engaged as a consultant by a large quarry operator to prepare an Archival Research Report for some suspected underground and open cut coal mines adjacent to and beneath the quarry, for consideration as part of a Risk Assessment for Inrush.

- Detail what sources of information you would access and how you would verify it?
- Detail the requirements regarding control of inrush with reference to the Mine Health & Safety Regulation 2007?

Question 3 (10 Marks)

You are the Nominated Mining Surveyor for an underground mine which uses the block cave method to extract ore.

You are planning to carry out a primary control traverse of the decline from the surface to the production level, a linear distance of over 3km.

The decline has a number of small radius turns and long straights.

With reference to ICSM SP1 (version 1.7), detail what considerations you would have in planning and carrying out the survey to achieve Class D or better?

Question 4 (10 Marks)

You as the Registered Surveyor at a Mine are required to prepare a report to establish tenure for an overland rail line.

Detail issues including surveys that would need to be considered in this report.

The report can be structured using the following headings:-

- Understanding of current tenure along the proposed overland rail line.
- Mining Consents, Current or additional.
- Identify the available tenure (available to your company) and determine the most suitable tenure.
- Survey Requirements.

Question 5 (10 Marks)

Describe the process and application involved to allow for an application to discontinue the use of an emplacement area for an open cut coal mine?

Question 6 (10 Marks)

You are the Nominated Mine Surveyor at a new underground metalliferous mine and have and have been asked to carry out some contract compliance surveys of some new infrastructure being built for the mine by a contracting company.

The work will involve engaging some addition survey resources from a local Land Surveyor as well as site personnel.

Detail what steps you would take to ensure compliance with the provisions of the Work Health and Safety Act and Regulation?