

New South Wales

**Board of Surveying and Spatial Information**

# **MINING LAW ASSESSMENT**

## **MINING SURVEYING**

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

(Mining Legislation)

Wednesday 11<sup>th</sup> September 2019

**All questions to be answered**

Duration 2 Hours

Pass Mark of 60% Required

1. As defined in AS 4368, what is the conventional colour to be used for power cables under 220v?
2. As defined in AS 4368, sketch the symbol for a gas drainage borehole.
3. As defined in AS 4368, sketch the symbol for an underground magazine.
4. As defined in AS 4368, sketch the symbol for an open stope.
5. As defined in AS 4368, sketch the symbol for a colliery or mine control station.
6. With reference to the Mining Act 1992, name 5 designated ancillary mining activities.
7. With reference to the Mining Act 1992, define compensable loss.
8. With reference to the Mining Regulation 2016, what is the meaning of deep underground mining with reference to royalty calculations?
9. With reference to the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, who is the consent authority?
10. With reference to the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, what Land does the policy apply to?
11. With reference to the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, name 6 items of development permissible without consent.
12. As described in the Work Health and Safety (Mines and Petroleum Sites) Act 2013, what is the meaning of “mining operations” or “mining activities”?
13. As described in the Work Health and Safety (Mines and Petroleum Sites) Act 2013, what is a “notifiable incident”?
14. As described in the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014, define emplacement area.
15. With reference to the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014, what is the operator of a mine’s responsibility in regards to security of survey data?
16. With reference to the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014, when must a survey plan be provided to the regulator?
17. With reference to the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014, define subsidence.

18. As described in the Surveying and Spatial Information Act 2002, define formal survey plan.
19. As described in the Surveying and Spatial Information Act 2002, what is the meaning of spatial information?
20. As described in the Surveying and Spatial Information Regulation 2017, what is the application of the Regulation?
21. As described in the Surveying and Spatial Information Regulation 2017, define monument.
22. As described in ESG3, explain the difference between a level 1 and a level 2 mine.
23. As described in ESG3, when is a MOP required?
24. As described in ESG3, explain the interaction between the MOP and development consents.
25. With reference to ICSM SP1, what 4 components is class dependent upon?
26. With reference to ICSM SP1, what is the 'c' value for a class D survey, in the formula  $r = c(d + 0.2)$ ?
27. According to ICSM SP1, for horizontal angle observations, what is the high and medium instrument least count category, for a class D survey?
28. Name 5 files that may be used to make up a shapefile and describe the purpose of each file.
29. With reference to the Survey and Drafting Directions for Mine Surveyors 2015 (NSW Mines), describe the process for the Cessation of Duties of a Nominated Mining Surveyor.
30. With reference to the Survey and Drafting Directions for Mine Surveyors 2015 (NSW Mines), define a void plan.
31. With reference to the Survey and Drafting Directions for Mine Surveyors 2015 (NSW Mines), what is the definition of a 'subsidiary survey'?
32. With reference to the Survey and Drafting Directions for Mine Surveyors 2015 (NSW Mines), by signing and dating the administration sheet of the Mine Survey Plan, what is the Nominated Mining Surveyor declaring?

Question 2 (10 Marks)

You are an employee of a small surveying firm providing UAV surveys.

You have been engaged to fly the stockpile and emplacement area of a coal operation for the monthly surveys.

With reference to the Work Health and Safety Act and Regulations, detail the steps and processes that would enable you to go to site and complete the work.

### Question 3 (10 Marks)

Your contacting company has been engaged to complete a check survey for a major underground metalliferous mine.

The mine is approximately 1.2km deep and it is proposed to carry out the survey on a continuous basis over a 2 day period starting from the mines surface baseline connecting to the lowest level of the mine.

With reference to the Surveying and Spatial information Act who can undertake this work and what are the supervision requirements?

With reference to ICSM SP1 what are the observation techniques, tolerances and calculation methods required to achieve the Class D standard required?

Question 4 (10 Marks)

You are the nominated mining surveyor for a metalliferous underground mine.

As a result of improved commodity prices the mine where you are employed is looking to mine an area around some old workings from a previous owner mined in the 1940's.

Detail how you would undertake an archival research project for the area and what steps the mine would have to take to address any unresolved inrush issues with reference to Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.

Question 5 (10 Marks)

You are the Nominated Mining Surveyor at an open cut mine that has just been granted a Development Consent and Mining Lease for an extension that covers an area that includes some unformed Crown and Council roads.

Describe in detail the processes and steps to allow mining activities to be undertaken in these areas.

Question 6 (10 Marks)

You are a Registered Mining surveyor, tasked with controlling survey works for a recently approved large open cut mining operation.

Detail the application to be undertaken in regards to Survey infrastructure based on this being a Large-Scale Development Project.

Can you complete all parts of the application?

What do you require to establish your origin of Co-ordinates for this operation?