

New South Wales

Board of Surveying and Spatial Information

MINING LAW ASSESSMENT

MINING SURVEYING

Surveying and Spatial Information Act 2002

(Mining Legislation)

Wednesday 24th February 2021

All questions to be answered

Duration 2 Hours

Pass Mark of 60% Required

1. What is the conventional colour for underground barrier pillars, as defined by AS 4368?
2. What is the conventional colour for first aid equipment on a rescue plan, as defined by AS 4368?
3. What scale should a surface electrical plan be drawn, as defined by AS 4368?
4. Sketch the symbol for an auxiliary fan, as defined by AS 4368.
5. Sketch the symbol for a trig station (pillar), as defined by AS 4368.
6. With reference to the Mining Act 1992, define owner.
7. With reference to the Mining Act 1992, define surveyor.
8. With reference to the Mining Regulation 2016, what are the two types of leases that can be applied for?
9. With reference to the Surveying and Spatial Information Act 2002, Entry to land for survey purposes, define the Manner in which power of entry to be exercised?
10. With reference to the BOSSI Determinations, what is the supervision level required for a person holding a recognised Qualification in Surveying?
11. With reference to the Archival Research Guideline, what information is listed on the colliery card index.
12. With reference to the Archival Research Guideline, give 2 examples of 'primary source' information available at the Department.
13. With reference to the Archival Research Guideline, what is the difference between a Level 1 and Level 2 accuracy rating for information?
14. As stated in the Work, Health and Safety (Mines) Act 2013 what is the definition of a "notifiable incident"?
15. With reference to the Work, Health and Safety (Mines) Act 2013, what is the definition of a 'mine'?
16. Name the 6 activities in which the Work, Health and Safety (Mines) Act 2013 does not apply?
17. As described in the Work Health and Safety (Mines and Petroleum Sites) Act 2013, what are 3 objects of the Act?
18. With reference to the Survey and Drafting Directions for Mining Surveyors 2020 (NSW Mines), name and describe the purpose of the files that can be used to make the shapefile format.

19. As described in the Surveying and Spatial Information Act 2002, what is the definition of a land survey?
20. As described in the Surveying and Spatial Information Act 2002, what is a registered surveyor's responsibility for damage to land while exercising power of entry?
21. As described in the Surveying and Spatial Information Regulation 2017, what is the application of the Regulation?
22. As described in the Surveying and Spatial Information Regulation 2017, what is recognised practical experience?
23. With reference to the Surveyors General's Directions, No.5, what is the minimum number of slope distances to be measured to the same reflector from each pillar?
24. With reference to the Surveyors General's Directions, No.5, list the 3 inherent systematic errors that must be solved to achieve legal traceability.
25. With reference to the Surveyor General's Directions, No.11, what must a proposed project submit to the Office of the Surveyor-General in relation to survey infrastructure and when must it be done?
26. As described in the Surveyor General's Directions, No. 5, define legal traceability
27. With reference to ICSM SP1, define class?
28. As described in ESG3, when is a MOP required?
29. With reference to the Survey and Drafting Directions for Mining Surveyors 2020 (NSW Mines), what two datums must all Mine Survey Plans be submitted on?
30. With reference to the Survey and Drafting Directions for Mining Surveyors 2020 (NSW Mines), define two types of surveys requiring Records?
31. With reference to the Survey and Drafting Directions for Mining Surveyors 2020 (NSW Mines), what two scales provide a Secondary Survey accuracy of 2m?
32. With reference to the Survey and Drafting Directions for Mining Surveyors 2020 (NSW Mines), define Endorsement.

Question 2 (10 Marks)

You are the nominated surveyor for a small underground coal mine.

The mine is looking to establish a new emplacement area on some land owned by the mining company adjacent the current mining lease.

What approvals and mining tenure would be required to establish the emplacement area and give an overview of the application processes?

Question 3

You are a Registered surveyor operating a small contract survey company.

A large mining company is looking to establish a new operation in an area suspected of having multiple hand mining Underground operations which closed 50 years ago. The land is privately owned at present. You have been contracted to provide survey data on the locations of these operations.

A) Detail what Research you would undertake? (5 marks)

B) Detail the procedure, under the Surveying and Spatial Information Act, how you would access this land and what survey work can you undertake? (5 Marks)

Question 4 (10 Marks)

You are the registered mining surveyor at an underground coal mine, where your company is the holder of various mining leases and exploration licences in future mining areas. The company wishes to undertake prospecting in the future mining area.

Define prospecting and outline the approval process for prospecting within your exploration licence.

What are the approval considerations for prospecting on your mining lease?

Are there any further considerations in an instance where an exploration licence covers an area situated above the subsurface mining lease?

Question 5

You are the nominated mining surveyor at an underground coal mine. The mine utilises longwall mining to extract coal which has impacts on surface and subsurface features.

- A) What are the requirements for subsidence monitoring under the WHS Regulations and Survey and Drafting Directions for Mining Surveyors? (5 marks)
- B) The regulator has directed the mine install and monitor a subsidence line that covers the current longwall and future proposed longwalls, with results (E, N, H) to be provided in MGA2020. The length of the monitoring line is proposed at 1500m with subsidence monitoring points every 20m. The line will be installed in dense and steep bushland. With reference to ICSM SP1, outline the accepted class, equipment, networks, standards and reductions methods that should be used. (5 marks)

Question 6 (10 Marks)

You are the nominated surveyor for a small open cut metalliferous mine.

You have been instructed to obtain a detail survey for a potential highway realignment at the mine.

It has been decided to engage a contracting surveying company to complete the work.

Detail the steps required to engage the company and the items to be addressed to allow the work to be completed safely with reference to the Work Health and Safety Act and Regulations