

CANDIDATE NUMBER: \_\_\_\_/\_\_\_\_ EXAMINATION: DEPUTY EXAM PAPER: DEP– Coal Mining Practice and Legislation DATE: Friday 5 September 2014

## **EXAMINATION BOOKLET**

Q #	PEO	AO	MARKS	EXAMINERS Signature	Marking Review (if result 55-59)	Formal Review
1			/20			
2			/20			
3			/20			
4			/20			
5			/20			
TOTAL			/100			



(DEP)

### **NSW Coal Competence Board**

# EXAMINATION FOR CERTIFICATE OF COMPETENCE AS

### DEPUTY

(Coal Mine Health & Safety Act 2002)

NORTHERN REGION SOUTHERN REGION WESTERN REGION

Friday 5 September 2014

10am to 12.30pm

**Coal Mining Practice and Legislation** 

INSTRUCTION TO CANDIDATES

All five (5) questions are to be attempted.

All questions are of equal value - 20 marks each.

10 minutes reading time is allowed prior to the start of the examination.

#### Question 1 (total 20 marks)

a) <u>Clause 21 of the Coal Mine Health and Safety Regulation 2006</u> deals with ventilation arrangements.

List 5 provisions of this clause. (10 marks)

b)	<u>Section 18 of the Work Health and Safety Act 2011</u> states the factors that need to be considered in determining "reasonably practicable" in relation to a duty to ensur health and safety. State these factors. (10 marks)	e
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	Sept	ember 20	14	-

a)	Describe how a chemical oxygen self-rescuer works. (5 marks)	
b)	You are a Deputy leading several men out of a mine during an emergency. The situation is as follows:	
	There is an irrespirable atmosphere.	
	<ul> <li>You are wearing chemical oxygen self-rescuers.</li> </ul>	
	<ul><li>You are between caches.</li><li>You are on foot.</li></ul>	
	<ul> <li>You have had the self-rescuers on for 15 minutes.</li> </ul>	
	It comes to your attention that the breathing bags on some of the self-rescuers are deflating and the wearers appear to be struggling for air. What actions would you take? (5 marks)	

c)	You are the Deputy in a 2 heading development unit. It is reported to you that a cre member has stumbled while stepping off the CM bolting platform and may have a fractured ankle.	W
	List your actions in order of priority. (10 marks)	
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#### Question 3 (total 20 marks)

a) What is "CO make" and why is this analysis method used? (5 marks)

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 b) You are asked to take a gas sample from a sealed area using a manual pump. There is a fixed sample point on the seal. Describe how you would take the sample and label the sample. (5 marks)

c) (5 marks)

i. Explain what is meant by "open circuit capacity" of an auxiliary fan.

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ii. Explain what is meant by "recirculation" in regards to an auxiliary fan.

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d) With the aid of a diagram describe the major components of an auxiliary fan including the degassing box, stone trap, variable inlet vanes and motor. (5 marks)

#### Question 4 (total 20 marks)

a) Describe, with the aid of diagrams, the setup of a gas drainage drill rig in a stub off the travelling road of a 2 heading development. (12 marks)

This is to include:

- Ventilation
- Environmental monitoring
- Gas control measures
- Water control measures

/PTO

Question 4 part a) continued

b)	Describe the inspections you as a Deputy would carry out in respect to a gas drainage drill rig. Include the inspections required to ensure the drill rig can operate safely and effectively. (8 marks)

#### Question 5 (total 20 marks)

a) Longwalls often use brattice at the tail gate to control the potential for methane to flow over the tail gate drive.

Describe, with the aid of diagrams, how this brattice is set up to achieve the required controls. (5 marks)

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5	Describe the actions to be taken by the Deputy in relation to the tail gate brattice as
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 On a longwall operating with an antitropal ventilation system, under what circumstances would you install a brattice wing in the main gate of the longwall? Describe how it would be installed. (4 marks)

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#### END OF QUESTIONS

**END OF PAPER** 

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