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CANDIDATE NUMBER:	
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OCM1 - Legislation

MINING ENGINEERING MANAGER OF COAL MINES OTHER THAN UNDERGROUND COAL MINES

EXAMINATION FOR CERTIFICATE OF COMPETENCE

Work Health and Safety (Mines and Petroleum Sites) Act 2013 Work Health and Safety (Mines and Petroleum Sites) Regulation 2014

Legislation to be assessed:

Unless otherwise stated all references to Act and Regulations are to:

Work Health and Safety Act 2011

Work Health and Safety Regulation 2017

Work Health and Safety (Mines and Petroleum Sites) Act 2013

Work Health and Safety (Mines and Petroleum Sites) Regulation 2014

Explosives Act 2003

Explosives Regulation 2013

This Examination is held in the following location:

Region: New South Wales

Venue: Tocal College

Room: McFarlane Court 3

Start date/time: 09 Jun 2022 09:20:00

Duration 1 Hour OCM1 – Legislation

INSTRUCTIONS TO CANDIDATES

Q #	Marks	Available Marks	Marked by Initials	Summary comments to justify
1		25		
2		25		
3		25		
4		25		
Paper Total		100		Marks checked by:

EXAM BOKLET

Answers are to be written in the allocated spaces within this booklet ONLY

Answers must be written in pen however, drawings may be completed in pencil

This booklet is not to be altered in any way, pages are not to be added or removed

Additional space is provided at the end of the paper. Please label which question the answer relates to.

Please state all assumptions.

Question 1

a. Summarise the "Primary duty of care" requirements specified under section 19 of the WHS Act 2011. (6 marks)

b. Summa	arise the duties of workers as specified by Section 28 of the WHS Act 2011. (4 marks)
	IS Act 2011, Section 27 Duty of Officers states an officer of a PCBU must exercise "due diligence", the taking of reasonable steps.
i.	In your own words, define "due diligence" from the perspective of a Mining Engineering Manager. (3 marks)
ii.	In a simple table, summarise each of the "reasonable steps" required to be taken in relation to due diligence and provide 3 examples for each step relevant to the role of Mining Engineering manager. (12 marks)

Question 2

a. What is a code of practice? (2 marks)
b. Who do they apply to? (2 marks)
c. What is the legal significance of a code of practice in court proceedings? (3 marks)
d. Name 3 codes of practice approved by the Minister for Resources and Energy that apply specifically to NSW open cut coal mines. (3 marks)
e. What does "MDG" stand for? (1 mark)
f. Name 2 key benefits that an MDG may provide? (2 marks)
16

g. MDG 28 deals with Safety requirements for coal stockpiles and reclaim tunnels. List 6 health & safety hazards relating to reclaim tunnels referenced in the MDG and name 3 suggested controls to address each hazard. (12 marks)				

Question 3

a. Summarise the functions and powers of inspectors under the Work Health & Safety Act 2011. (6 marks)	
b. What may an inspector do on entry to an open cut mine? (7 marks)	
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c. The Work Health & Safety Act 2011 prescribes certain notices that may be served at an open cut mine.
Name 4 of these notices that may be served by the <u>Regulator</u> or an <u>Inspector</u> . For each, outline the purpose of the notice and the actions required to be taken in response to each notice. (12 marks)
1,

Question 4	
Part 6 of the Work Healt ovision of information to	h and Safety (Mines and Petroleum Sites) Regulation 2014 relates to the the regulator.
egarding notification of ill nedical treatment". (5 ma	ness and injury that requires medical treatment, detail what is meant by arks)

b. Outline the high potential incidents relating to an open cut mine that are required to be notified. (8 marks)
c. Your OCE calls you to report an incident where the bucket of a 600t excavator has struck a D11 dozer during clean-up operations. The dozer operator is shaken but appears to be uninjured. The dozer has sustained moderate damage to the cab structure and handrails.
List the key immediate and foreseeable legislative requirements that are required to be complied with in relation to this incident. (12 marks)

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OCM2 - Open cut mining practice

MINING ENGINEERING MANAGER OF COAL MINES OTHER THAN UNDERGROUND COAL MINES

EXAMINATION FOR CERTIFICATE OF COMPETENCE

Work Health and Safety (Mines and Petroleum Sites) Act 2013 Work Health and Safety (Mines and Petroleum Sites) Regulation 2014

Legislation to be assessed:

Unless otherwise stated all references to Act and Regulations are to:

Work Health and Safety Act 2011

Work Health and Safety Regulation 2017

Work Health and Safety (Mines and Petroleum Sites) Act 2013

Work Health and Safety (Mines and Petroleum Sites) Regulation 2014

Explosives Act 2003

Explosives Regulation 2013

This Examination is held in the following location:

Region: New South Wales

Venue: Tocal College

Room: McFarlane Court 3

Start date/time: 09 Jun 2022 11:35:00

Duration 3 Hours

OCM2 - Open cut mining practice

INSTRUCTIONS TO CANDIDATES

Q #	Marks	Available Marks	Marked by Initials	Summary comments to justify
1		60		
2		60		
3		60		
4		60		
5		60		
Paper Total		300		Marks checked by:

EXAM BOKLET

Answers are to be written in the allocated spaces within this booklet ONLY

Answers must be written in pen however, drawings may be completed in pencil

This booklet is not to be altered in any way, pages are not to be added or removed

Additional space is provided at the end of the paper. Please label which question the answer relates to.

Please state all assumptions.

Question 1

You are the Mining Engineering Manager and receive a phone call in the early hours of Sunday morning from the N/S Mining Supervisor/OCE.

He informs you that a Hitachi 3600 Coal Excavator is laying on its right- hand side on the coal floor. The operator is not injured however is experiencing chest pain and very anxious.

a. List in sequence the actions you would undertake as MEM in response to the incident. (20 Marks)

b. Detail the process you would initiate for the excavator recovery and machine assessment process after the Resources Regulator releases the incident scene. (20 Marks)
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c. List five (5) potential causes of this incident. (5 Marks)	
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E. List inve (a) potential causes of this includent. (a marks)	
E. LIST TIVE (3) POTENTIAL CAUSES OF THIS INCIDENT. (5 Marks)	
2. List tive (a) potential causes of this inclocit. (a marks)	

d. Outline the process you would use and actions you would implement to prevent reoccurrence of this incident. (15 marks)					

Question 2

You are the Mining Engineering Manager of a medium size open cut mine which produces 12Mt ROM coal per annum. The operation utilises 8 backhoe excavators between 200t to 800t in size and a fleet of 25 Komatsu 930E and 23 Komatsu 730E electric drive trucks and associated ancillary equipment.

A very wet 2021 has resulted in an additional waste and ROM requirement in the 2022 mine plan to meet business needs. A fleet of 6 CAT 793 trucks packaged with a CAT 6060 (600t) backhoe excavator is available for hire. All machines are just over 4 years old with hour meter ranges of 23,500 to 24,000 machine hours.

You have been tasked with the project of introducing the CAT Mining Fleet into your current fleet for a minimum 12-month period to assist in supporting the additional production required to meet the 2022 and Q1 2023 Mine Plan.

compliance aspects of this change to achieve an effective and timely introduction of the additional equipment to meet operational needs. State all assumptions. (60 marks)							

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Question 3

You are the Mining Engineering Manager of an open cut coal mining operation that has decided to dismantle and scrap an old electric rope shovel. You have been tasked with leading a team to select and engage a contractor to perform the work. The shovel has been condemned on an old spoil dump located in the open cut and will need to be dismantled and removed from where it is currently located.

a. Who from your mine would you elect to form a team in the contractor selection process and what would form your criteria for selection? (15 Marks)

b. Once a contractor is selected, list all the requirements before the contractor is allowed to start work.
(15 Marks)

c. Given the shovel is located in the open cut. How would you manage the interaction with site personnel

and machinery and what key system would the contractor need to follow?					
20 Marks)					

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Question 4
You are the Mining Engineering Manager of an Open Cut Coal Mine that utilises two electric rope shovels, three large hydraulic excavators and two large front-end loaders for the removal of coal and waste.
The mine is advancing towards old underground workings mined in the early to mid-1900's, comprising of bord and pillar first workings with some sections of secondary pillar extraction. Situated 100m below the surface, the worked coal seam is 2.5m in thickness and is the bottom seam mined in the Open Cut. The Open Cut has not mined through underground workings previously.
The Mine Plan is indicating that the next strip to be mined will be approximately 20 metres from the underground workings and the following strip will be mining through the underground workings.
a. Outline the information you require to enable an effective review of the mining process for the next two strips. (15 marks)

b. Describe the process that you would take including the people you would involve in developing a safe operational plan for mining adjacent to and through the underground workings in the next two strips.				
(15 marks)				

c. Describe the key risks and controls related to mining through underground workings that you would

consider in developing the plan.	
(30 marks)	

Question 5

You are the Mining Engineering Manager of an Open Cut Coal Mining Operation situated in a rural area surrounded by numerous small farms and residences in all directions.

Rain during the past two weeks has interrupted the loading of a critical overburden blast in tertiary material currently loaded with Heavy Anfo. The Blast Supervisor's inspection of the shot has discovered several partially slumped loaded holes and areas of cracked ground.

a. What are the key areas to be considered and the actions you would take to complete the loading of the shot in preparation for firing to manage the risks present?

(15 Marks)		

b. What are the key areas to be considered and the actions you would take to manage the risks safely and

effectively on the day of the blast?				
(15 Marks)				

c. After the blast is fired, NOx fume equivalent to level 3C medium rating leaves the mine boundary and disperses. Outline the steps you would take to manage this incident. (15 Marks)	
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d. Describe the process used and actions you would take to prevent reoccurrence of this incident to meet health, safety, and legislative requirements. (15 Marks)

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