

(DEP)

NSW Coal Competence Board

EXAMINATION FOR CERTIFICATE OF COMPETENCE AS DEPUTY

(Coal Mine Health & Safety Act 2002)

WESTERN REGION
SOUTHERN REGION
NORTHERN REGION

Friday 6 September 2013

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) Clause 36 of the *Coal Mine Health and Safety Regulation 2006* states what must be provided for in a mine's dust explosion management plan.
State 5 of these provisions in your own words. (10 marks)
- b) Clause 91 of the *Coal Mine Health and Safety Regulation 2006* details the three statutory incombustible content levels of dust. What are these levels and where do they apply? (6 marks)
- c) What is the definition of a face zone in respect to roadway dust? (2 marks)
- d) According to Clause 91 of the *Coal Mine Health and Safety Regulation 2006*, when must stone dust be applied to a working face? (2 marks)

Question 2 (total 20 marks)

- a) You are a Deputy reading a two anchor wire extensometer. The readings are
Total – 80mm
Lower – 75mm.
With the aid of sketches explain what these readings mean. (5 marks)
- b) A two anchor wire extensometer has readings reported of: Total – 0mm
 Lower – 30mm
List 2 potential causes for these readings and explain how you would confirm these causes? (5 marks)
- c) List 5 triggers you would expect to find in a strata TARP for a LW face? (5 marks)
- d) List 5 actions you would expect to find in a strata TARP for a LW face? (5 marks)

Question 3 (total 20 marks)

- a) The attached plan (P1) shows a pillar extraction panel at Sarah Colliery. The panel is lifting from the headings using three breaker line supports. The mine has a moderate methane make and no history of spontaneous combustion. The face is ventilated by flood ventilation. The miner is ready to commence lifting left and right from B heading.
- On the plan for Sarah Colliery (attached) show the following:
- i) All ventilation devices and the direction of air flow (3 marks)
 - ii) The commencement of the hazardous zone (3 marks)
 - iii) The position of bootend (2 marks)
 - iv) The position of the two shuttle car anchors (2 marks)
 - v) The position of the DCB and the route of the CM cable (2 marks)
 - vi) Show the air quantities at points (i), (ii), (iii), (iv) and (v) (3 marks)

b) On the attached plan (P2), show the standard mine plan symbols for:
(5 marks – 1 mark each)

- (i) Regulator
- (ii) Overcast
- (iii) Brattice stopping
- (iv) Fire substation
- (v) Telephone, number 525

Question 4 (total 20 marks)

a) You are a Deputy carrying out a pre-shift inspection of a two heading development panel. A Heading is ventilated by an auxiliary fan and ventilation tubes. There are no ventilation devices in B Heading. You find 1.5% methane general body in the last 5 metres of B Heading. You are to set up an air fan to ventilate B Heading.

- (i) What equipment will you require to set up the air fan? (2 marks)
- (ii) What are the hazards associated with air fans? (2 marks)

On the attached plan (P3) show –

- (iii) the location of the air fan (3 marks)
- (iv) the direction of the air flow in B Heading (3 marks)

b) List the major hazards associated with windblast in underground coal mines.
(5 marks)

c) List the major controls used to minimise the hazards associated with windblast in underground coal mines. (5 marks)

Question 5 (total 20 marks)

a) You are the Deputy in a cut-flit panel. A crew member informs you that the miner driver has been pinned between the miner and the rib.

What are your priorities and immediate actions? (10 marks)

b) Describe the breathing apparatus that is used at your mine for emergency escape.

Include the rated duration, maintenance requirements including daily checks, any stored equipment that is required to escape to the surface and the major factors that will affect duration of the apparatus. (10 marks)

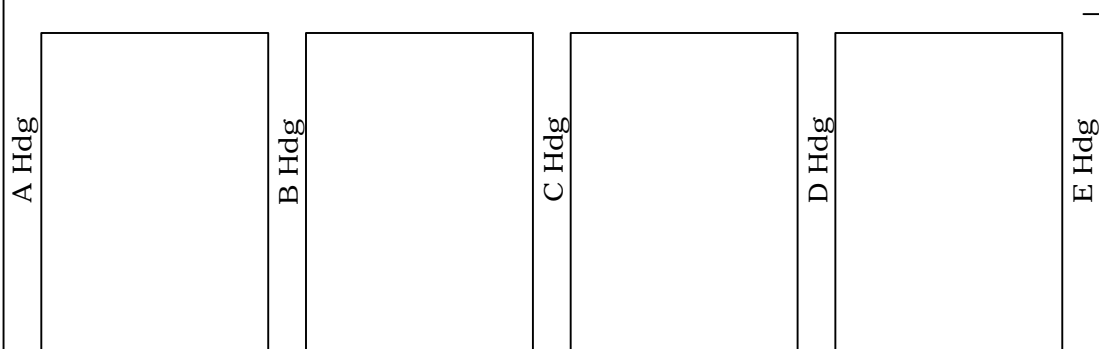
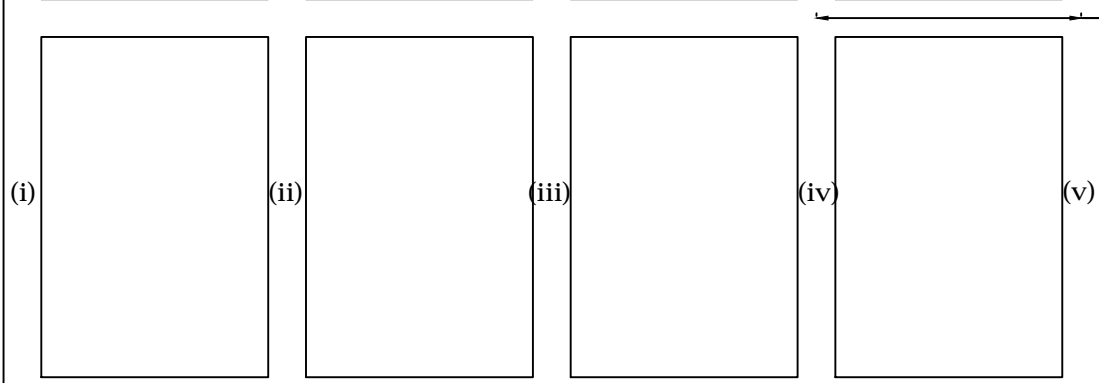
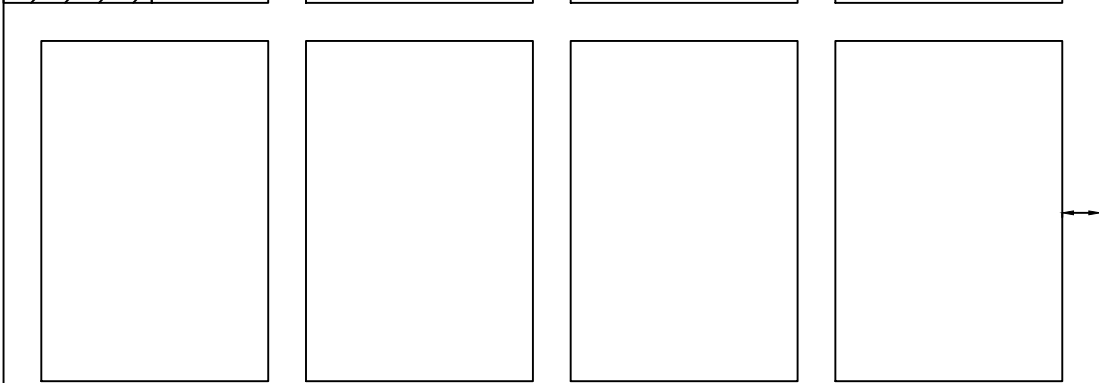
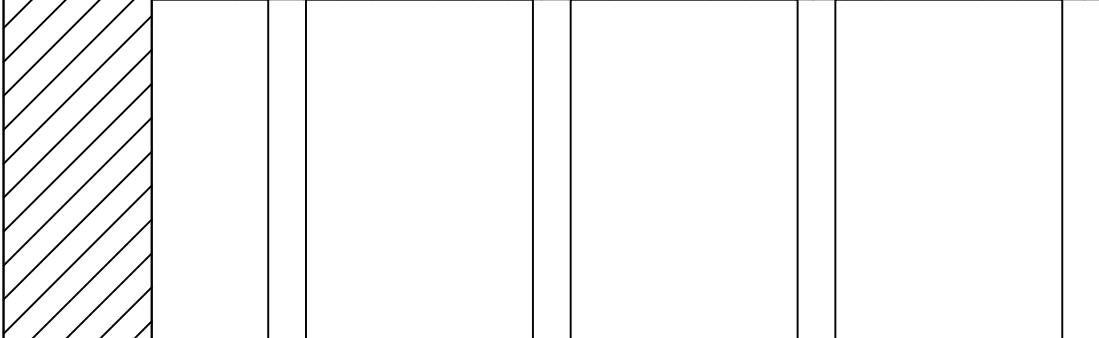
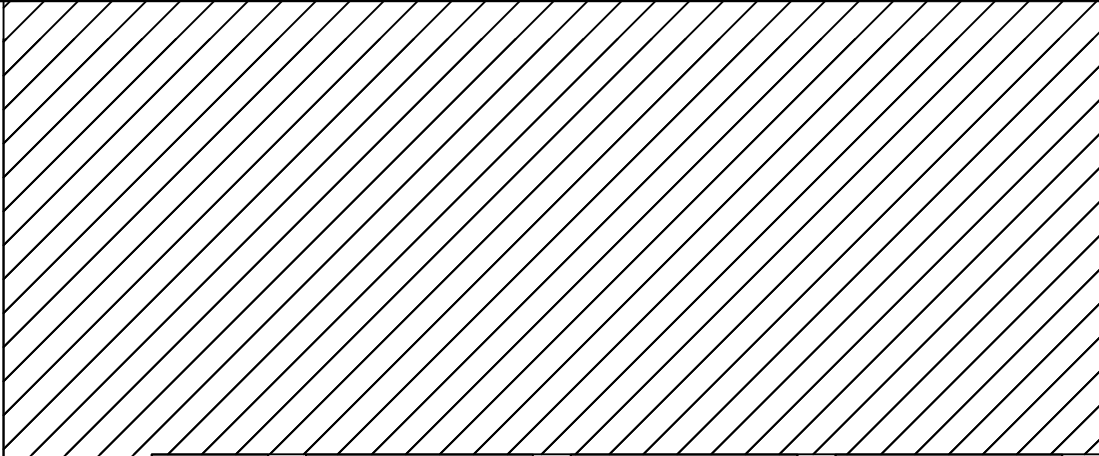
See attached plans

END OF QUESTIONS

END OF PAPER



P1



5.0m

30.0m

45.0m

(i)

(ii)

(iii)

(iv)

(v)

A Hdg

B Hdg

C Hdg

D Hdg

E Hdg

NOTES:

SCALE:

SCALE 1:1000

A4V
Sheet
1 of 1

TITLE:

Sarah Colliery

SVY01756

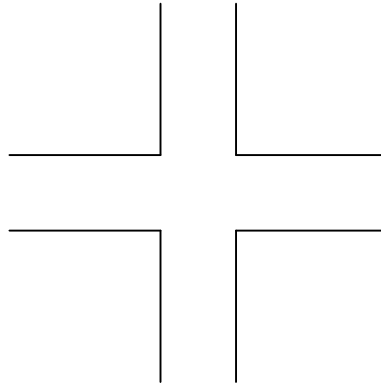
S:\Survey\Z_Miscellaneous\5_Heading Panel Layout.dwg



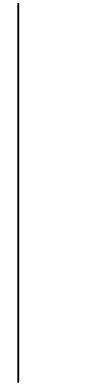
P2



(i)



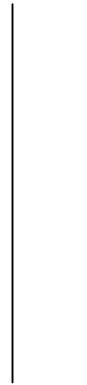
(ii)



(iii)



(iv)



(v)

LEGEND:

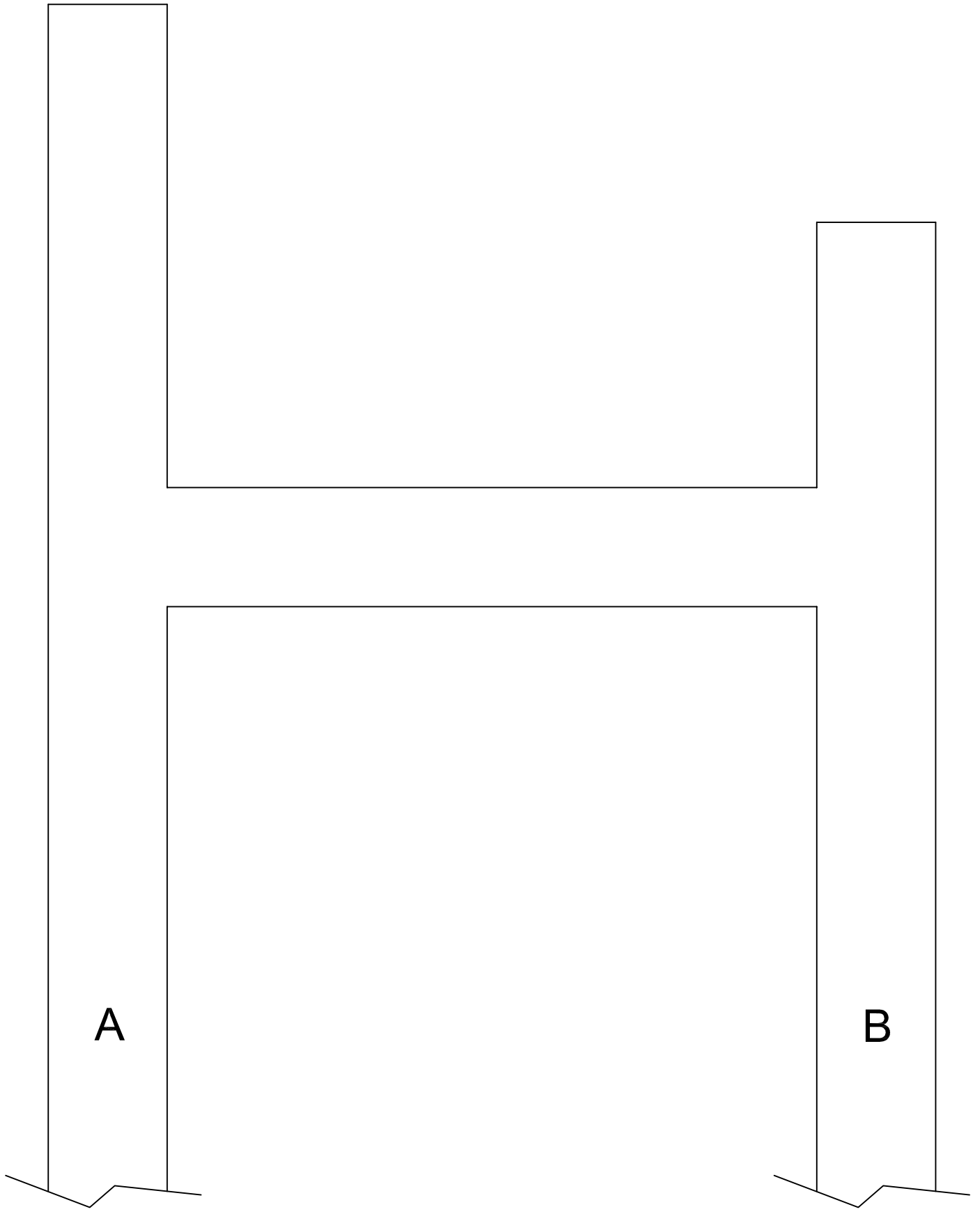
SCALE:

SCALE 1:500

A4H
Sheet
1 of 1

TITLE:

P3



A

B

