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**higher education  
& training**

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Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

T970(E)(N16)T  
**NOVEMBER 2012**

NON-NATIONAL CERTIFICATE:  
ENGINEERING CERTIFICATE OF COMPETENCY

**LEGAL KNOWLEDGE: MINES**

(13050026)

**16 November (X-Paper)**  
**09:00 – 12:00**

**CLOSED-BOOK EXAMINATION**

This question paper consists of 4 pages.

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING**  
**REPUBLIC OF SOUTH AFRICA**  
NON-NATIONAL CERTIFICATE: ENGINEERING CERTIFICATE OF  
COMPETENCY  
LEGAL KNOWLEDGE: MINES  
TIME: 3 HOURS  
MARKS: 100

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**INSTRUCTIONS AND INFORMATION**

1. Answer ALL the questions.
  2. Read ALL the questions carefully.
  3. Number the answers correctly according to the numbering system used in this question paper.
  4. Answers written in pencil are NOT allowed.
  5. This is NOT an OPEN-BOOK EXAMINATION. Candidates are NOT allowed to use any notes, textbooks or reference works during this examination.
  6. RULE OFF across the page on completion of each question.
  7. ALL calculations must be shown.
  8. Candidates who have NOT been accepted by the Commission of Examiners will be disqualified.
  9. Candidates arriving more than 30 minutes late will NOT be allowed to sit the examination. Candidates writing the examination may NOT leave the examination room BEFORE ONE HOUR after the beginning of the examination.
  10. Questions are based on the requirements and practical application of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and the regulations framed under Schedule 4. Answers MUST BE CONFINED to these requirements.
  11. NO cellular phones are allowed in the examination room.
  12. Write neatly and legibly.
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**QUESTION 1**

The employer requires an exemption from part of the Act in terms of Section 79 of the Mine Health and Safety Act. State the requirements and conditions for the application. **[10]**

**QUESTION 2**

Define the following in terms of the Minerals Act Regulations:

- |     |                            |     |
|-----|----------------------------|-----|
| 2.1 | Banksman                   | (2) |
| 2.2 | Gauge pressure             | (2) |
| 2.3 | Material                   | (2) |
| 2.4 | Winze                      | (2) |
| 2.5 | Movable electric apparatus | (2) |
- [10]**

**QUESTION 3**

Define the following in terms of the Mine Health and Safety Act:

- |     |                                  |     |
|-----|----------------------------------|-----|
| 3.1 | Health and safety representative | (3) |
| 3.2 | Mining area                      | (2) |
| 3.3 | Owner                            | (5) |
- [10]**

**QUESTION 4**

The employer wants to install a winch and a mono-rope winch. What measures must be taken to prevent people from being injured by these winches? **[10]**

**QUESTION 5**

What measures must the employer take to prevent persons from being injured by moving parts of any machine? **[10]**

**QUESTION 6**

As the engineering manager you have been requested to appoint subordinate engineers. What are the requirements and responsibilities of the subordinate engineers, in terms of Minerals Act regulations 2.13.3.1 and 2.13.3.2?

**[10]****QUESTION 7**

7.1 As the engineer you have reviewed the complaints book. What are the requirements for a complaints book, in terms of Minerals Act Regulation 4.4.1?

(6)

7.2 Poisonous water has been found in an area at a mine. What precautions need to be taken with regard to this water?

(4)

**[10]****QUESTION 8**

8.1 What are the requirements for locking devices on the clutches of winding plants?

(5)

8.2 When may an old used rope be used on a winding plant?

(3)

8.3 What signal is given by the onsetter to the winding engine driver when persons are about to travel in the conveyance?

(2)

**[10]****QUESTION 9**

9.1 What are the physical requirements for an elevator machinery motor room?

(5)

9.2 In terms of Minerals Act Regulation 20.7.3, when may machinery be set in motion?

(2)

9.3 State the restrictions that are placed on mines regarding joints in flexible or trailing cables in hazardous locations?

(3)

**[10]****QUESTION 10**

10.1 You are employed at an opencast mine. The mine has 150 employees. State the requirements for the first-aid rooms.

(7)

10.2 A mine uses cyanide. What are the first-aid requirements?

(3)

**[10]****TOTAL: 100**