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higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1310(E)(N15)T
NOVEMBER 2010

NON-NATIONAL CERTIFICATE:
ENGINEERING CERTIFICATE OF COMPETENCY

LEGAL KNOWLEDGE: MINES

(13050026)

15 November (X-Paper)
09:00 – 12:00

CLOSED-BOOK EXAMINATION

This question paper consists of 5 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

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
 2. No answers in pencil will be allowed.
 3. This is NOT an open-book examination. Candidates are NOT allowed to use any notes, text books or reference work during the examination.
 4. Number the answers correctly according to the numbering system used in this question paper. Illegible answers will NOT be marked.
 5. Rule off across the page on completion of each question.
 6. ALL calculations must be shown.
 7. Candidates who have not been accepted by the Commission of Examiners will be disqualified.
 8. Candidates arriving 30 minutes late will NOT be allowed to sit the examination. NO candidates writing the examination may leave the examination room before one hour after commencement of the examination.
 9. Questions are based on the requirements and practical application of the Mine Health and Safety Act (Act 29 of 1996) and the regulations framed under Schedule 4. Answers must be confined to these requirements.
 10. NO cellular phones are allowed in the examination room.
 11. Write neatly and legibly.
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QUESTION 1

State the objectives of the Act, with reference to the Mine Health and Safety Act. [10]

QUESTION 2

What are the requirements for the preparation of a Code of Practice as contemplated in Section 9 of the Mine Health and Safety Act? [10]

QUESTION 3

Mine Health and Safety Act Regulation 8.8(1) states: 'The employer must take reasonably practicable measures to prevent persons from being injured as a result of them, the clothes being worn by them or any other equipment being held by them coming into contact with or being drawn into any moving part of any machine.'

To be in compliance with Regulation 8.8(1) above, with regard to the installation and operation of belt conveyors, Regulation 8.9(1) of the Mine Health and Safety Act requires that the employer must ensure certain measures are in place. State these measures. [10]

QUESTION 4

4.1 State the requirements of Regulation 16.2 of the Mine Health and Safety Act regarding the issuing of self-contained self-rescuers pertaining to:

- 4.1.1 Coal mines (2)
- 4.1.2 Mines other than coal mines (2)

4.2 State the requirements regarding the provisions by the employer with respect to rescue teams. What are the minimum proportions determined by the maximum number of persons who could be underground at anyone time? (6) [10]

QUESTION 5

List at least 10 of the dangerous occurrences that must be reported in terms of Chapter 23 of the Mine Health and Safety Act Regulations. [10]

QUESTION 6

Define the following in terms of the Minerals Act:

- 6.1 Boiler (4)
- 6.2 Pressure vessel (6) [10]

QUESTION 7

- 7.1 State the requirements of the Mineral Act Regulations pertaining to the appointment of:
 - 7.1.1 Safety officers (2)
 - 7.1.2 Health and safety representatives (2)
 - 7.2 What are the requirements for the appointment of subordinate engineers? (4)
 - 7.3 State the requirements of Minerals Act Regulations pertaining to a mine overseer to exercise control over machinery? (2)
- [10]**

QUESTION 8

- 8.1 State the requirements as contemplated in Chapter 6 of the Minerals Act Regulations regarding:
 - 8.1.1 Bratticing in travelling ways (3)
 - 8.1.2 Height of main travelling roads (3)
 - 8.2 State the requirements as contemplated in Chapter 7 of Minerals Act Regulations regarding:
 - 8.2.1 Crossing fences (2)
 - 8.2.2 Barricades in steeply inclined workings (2)
- [10]**

QUESTION 9

Chapter 16 of the Minerals Act Regulations deals with 'Winding Machinery'. In terms of Winding Ropes, state the requirements pertaining to:

- 9.1 Suitability (1)
 - 9.2 Joined rope (1)
 - 9.3 Use of old rope (2)
 - 9.4 Spare rope (1)
 - 9.5 Test of new rope (1)
 - 9.6 Examinations of attachments and test run (2)
 - 9.7 Particulars of rope to inspector (2)
- [10]**

QUESTION 10

Chapter 21 of Minerals Act Regulations deals with electricity.

- 10.1 How must all electric apparatus be selected, installed, worked, marked and maintained? (2)
 - 10.2 What are the requirements pertaining to the examination, adjustment, testing or any work to be done on electrical apparatus? (3)
 - 10.3 What are the provisions that apply to any electrical installation in a hazardous area? (5)
- [10]**

TOTAL: 100