



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

MINE ENGINEER'S CERTIFICATE OF COMPETENCY EXAMINATION

MINES AND WORKS - LEGAL KNOWLEDGE

DATE: 19 NOVEMBER 2018

TOTAL MARKS: 100

TO PASS: 50

TIME ALLOWED: 3 HOURS
(09H00 to 12H00)

NOTE:

- This question paper consists of **FOUR** pages including cover page.
- All questions must be answered.
- All answers are to be presented in a neat and decipherable manner. Papers will not be marked if not decipherable.
- The use of highlighters is not allowed.
- Do not use a red pen.
- Read the instructions on the front page of your answer book carefully.
- No cellular phones shall be allowed in the examination venue.
- The use of computers, laptops and palmtops are prohibited.
- The use of programmable calculators are not allowed.

Question 1

You are the manager of a mine. A company is supplying a hazardous substance for use in the gold plant at the mine. What are the responsibilities of a supplier of hazardous substances for use at a mine in terms of Section 21 of the Mine Health and Safety Act? (10)

Question 2

You are the engineer in charge of the winding plant at the mine. To comply with the Minerals Act Winding regulations state and explain the examinations you are going to do. (10)

Question 3

The mine has decided to purchase a used boiler from a neighbouring country that will be used in the mine's gold plant. As the responsible engineer you need to ensure that the boiler meets the construction and maintenance requirements of Regulation 22.2 of the Minerals Act. What are you going to check before you give your approval for the boiler to be purchased? (10)

Question 4

Define the following in terms of the chapter 3 electrical definitions of the Mine Health and Safety Act regulations.

4.1 flexible cable (5)

4.2 circuit (3)

4.3 domestic voltage (2)

(10)

Question 5

You are an engineer in charge of the electrical reticulation at a mine. The employer, in terms of regulation 3.3 of the Mine Health and Safety Act needs to take reasonable practical measures to ensure that no person suffers from electrical shock, arc flash or electrocution. In addition to fencing off electrical apparatus what other measures must be taken? (10)

Question 6

You are the employer of an open cast mine. Section 23 of the Mine Health and Safety Act covers the employees' right to leave dangerous working place. You as the employer have to determine effective procedures for the general exercise of the right granted. What must the procedure provide for? (10)

Question 7

You are the manager of an underground mine that makes use of a rail-bound system to transport mineral and employees. According to Regulation 8.2 of the Mine Health and Safety Act the employer must take reasonable measures regarding rail-bound transport. State the measures that need to be taken. (10)

Question 8

You are the manager in charge of an underground mine. The mine has a number of water storage facilities as well as pumping systems. The employer needs to prepare and implement a procedure to prevent injury to persons involved with hydraulic pressure systems. What hydraulic pressure systems need to be addressed? (10)

Question 9

The guideline for the compilation of a mandatory Code of Practice for Trackless Mobile Machines requires various aspects to be addressed in the mandatory code of practice. One of these aspects is the measures that need to be taken with regard to the remote and the remotely controlled trackless mobile machines. What measures need to be taken? (10)

Question 10

You are an engineer in charge of a mine that has purchased a pressure vessel. According to Minerals Act Regulation 23.3 particulars of the pressure vessel need to be stamped on a plate that is securely fixed to the pressure vessel. State the particulars that need to be on the plate. (10)

TOTAL [100]