mineral resources
& energy

Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

MINE MANAGER'S CERTIFICATE OF COMPETENCY EXAMINATION

MINING 111
(MINE MANAGEMENT AND INDUSTRIAL LAW)

METALLIFEROUS AND COAL MINING

DATE: **10 APRIL 2025**

TOTAL MARKS: 100
TO PASS: 50

TIME ALLOWED: **3 HOURS**
(09h00 to 12H00)

INSTRUCTIONS:

- This question paper consists of FOUR (4) pages including the cover page.
- All questions must be answered and are to be presented in a neat and readable manner. Answer books will not be marked if not legible.
- Read the instructions on the front page of your answer book carefully.
- The use of a non-programmable calculator is allowed.
- Use a pen that writes in ink and should not be erasable.
- Do not use a red pen.
- Restrict the use of highlighters.
- No cellular phones, computers, laptops, or other related devices shall be allowed in the examination venue.

Question 1:

1. Describe the Conciliation process prescribed by the Commission for Conciliation, Mediation and Arbitration. Your answer must include aspects such as:
    a. Internal / mine procedures (2)
    b. What happens during the conciliation process (8)
    c. Role of the commissioner (5)

2. Describe the Arbitration process prescribed by the Commission for Conciliation, Mediation and Arbitration. Your answer should include aspects such as:
    a. When does a person initiate the arbitration process? (5)
    b. Who may present a case at an arbitration hearing? (5)

Total marks **[25]**

Question 2:

1. What is a Gantt chart and what is it used for? (5)
2. What is linear programming and how can it improve operations management? (5)
3. What is a SWOT analysis and what is it used for in an organisation? (5)
4. What is a SOAR analysis? How does it compare to SWOT – what are the similarities and differences? (5)
5. What is a value chain (5)

Total marks **[25]**

Question 3:

A mine is producing 10,000 units per annum at R300 per unit. The production cost can be reduced to R200 per unit by purchasing and employing new modern equipment. The equipment can be bought for R4,100,000 and sold at the end of the evaluation period for 20% of the original purchase value. Capital is depreciated at 10% per annum on a straight line basis. The mine's product is sold at R300 per unit. Your company requires a payback period of less than 2 years for all capital projects. The rate of hurdle needed is 15%. Projects are evaluated over 7 years.

1. Draft a cash flow table for the project showing the following:

   (a) Value of all the cash elements in the year they will occur (6)

   (b) Show the annual cash flow in the above Cash Flow Table (2)

   (c) Indicate the cumulative cash flow per year in the above Cash Flow Table (2)
2. Calculate the internal rate of return and comment on the calculated figure (3)
3. What is the net present value for the project if the annual cash flow is discounted at 15% per annum and comment on the figure (3)
4. What is the payback period in years (2)
5. Will the project be approved – comment why (4)
6. Define what is meant by the term IRR (1)
7. Define what is meant by the term NPV (2)

Total marks **[25]**

Question 4:

1. Discuss the term Inflation. (2)
2. Discuss the term Interest Rates. (3)
3. What do you understand about the term Currency? (4)
4. Discuss the term Investment Climate. (3)
5. Discuss the term Profit Margin. What is the term Profit Margin used for? Can profit increase while the profit margin reduces – explain your answer. (5)
6. What is a Balance Sheet and what is it used for? (4)
7. Describe the term Revenue. How is it calculated? (2)
8. Discuss the term Profit. (2)

Total marks **[25]**

Grand Total **[100]**