



PROGRAM : NATIONAL DIPLOMA
IN EXTRACTION METALLURGY
SUBJECT : **MINERAL PROCESSING II**
CODE : **MPR 2A20**
DATE : SUMMER EXAMINATION
18/11/2017
DURATION : (SESSION 1) 08:30– 10:30
WEIGHT : 50:50
FULL MARKS : 90
TOTAL MARKS : 100

EXAMINER : Dr. W. NHETA
MODERATOR : MR M. HENDERSON
NUMBER OF PAGES : 2 PAGES

INSTRUCTIONS TO STUDENTS:

1. ANSWER ALL QUESTIONS.
 2. DRAW NEAT DIAGRAMS AND WRITE CLEARLY, MARKS CAN BE DEDUCTED FOR UNTIDY WORK.
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Question 1

- 1.1 Considering storage, why is blending important? (5)
- 1.2 What is the difference between storing ore because of a difference in production rates and to create reserves? (10)
- 1.3 Why would you store ore inside a plant? (5)
- [20]**

Question 2

- 2.1 Sketch a milling circuit closed by a cyclone. (6)
- 2.2 Label all of the streams and show where water may be added (9)
- 2.3 Briefly explain why water is added (5)
- [20]**

Question 3

- 3.1 Why do the results from laboratory screening differ from those produced by industrial screening? (3)
- 3.2 What are the material factors (4) and mechanical factors (10) that affect the performance of industrial screening? (14)
- [17]**

Question 4

- 4.1 Define filtration. (3)
- 4.2 Produce a labelled sketch of a Drum Rotary Vacuum Filter (8)
- 4.3 Describe the cycle of operations of such a filter (12)
- [23]**

Question 5

- 5.1 What discharge characteristics should a well-designed feeder provide? (10)
- [10]**
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