PROGRAM          : NATIONAL DIPLOMA
                 IN EXTRACTION METALLURGY
SUBJECT          : MINERAL PROCESSING II
CODE             : MPR 2A20
DATE             : SUMMER SSA EXAMINATION
                 12/01/2017
DURATION         : (SESSION 3) 15:00 – 17:00
WEIGHT           : 50:50
FULL MARKS       : 72
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.
Question 1

1.1 Discuss what is good and bad about a Jaw crusher when used in the primary crusher role. (20) [20]

Question 2

2.1 What is the normal sequence of stages in solid/liquid separation? (3)
2.2 Discuss how separation takes place in a thickener and the principles involved (13) [16]

Question 3

3.1 Compare Mass flow and funnel flow from a bin (11)
3.2 What is meant by live load in a silo? (1)
3.3 Define % Live Load (2) [14]

Question 4

What influence will the following factors have upon the capacity, cake moisture and filtrate clarity of a rotary vacuum filter:

4.1 Higher Feed Pulp density (5)
4.2 Coarser Feed solids size (5)
4.3 Lower Vacuum (5)
4.4 Use of flocculants (5)
4.5 Comment on what is meant by capacity. (2) [22]

Total Marks 72