

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF APPLIED CHEMISTRY

SUPPLEMENTARY EXAMINATIONS – JULY 2003

PRINCIPLES OF PROCESS ENGINEERING – SCH 2218

TIME – (3) THREE HOURS

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions, each question carries 20 marks.

1. With the aid of a diagram, describe the rate of drying.
2. With the aid of a diagram, discuss how the time of drying can be obtained using a drying curve.
3. Discuss in detail the diffusion and capillary theories of drying.
4. With the aid of diagrams, describe drum dehydration.
5. A wet solid is dried from 25 percent moisture under constant drying conditions in 15 ks (4.17h). If the critical and the equilibrium moisture contents are 15 and 5 percent respectively, how long will it take to dry the solid from 30 to 8 percent moisture under the same conditions.

END OF QUESTION PAPER!!!