NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, Nnamdi Azikwe Express Way, Plot 91, Cadastral Zone, Jabi,Abuja

FACULTY OF AGRICULTURAL SCIENCES
FIRST SEMESTER EXAMINATION: June/July
COURSE COED AGM314
COURSE TITLE: INTRODUCTION TO AGRICULTURAL MECHANIZATION
INSTRUCTION: Answer any four (4) Questions
TIME ALLOWED: 2 Hours

Q(1a) Define what a machine is and mention five of its usefulness in agricultural production.

Q(1b) What are the six basic machines use in agricultural production?

Q(2a) Define (1) mechanical advantage (M.A) of a machine
          (2) Velocity ratio
          (3) Efficiency

Q(2b) If you are given a load of 300kg and a force of 245 newton (N) to lift the load a distance of 4m, calculate the M.A. the distance moved by the load is 8m. Calculate the Velocity Ratio.

Q(3a) Mention any five tools commonly used in an agricultural workshop.

Q(3b) An inclined plane is at an angle of 30° to the horizontal which is used as a simple machine. A force E is used to push a load of 120N uniformly up the plane at an efficiency of 50%. Calculate the (1) V. R and (2) The magnitude of E.

Q(4a) Name the cycles of operation in a typical petrol or diesel engine.

Q(4b) What are the four events that are required to convert heat into motion.

Q(5a) Define tillage and state any five of its purposes.

Q(5b) Differentiate between the two cost of owning and operating farm machinery.