



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
MAY/JUNE 2012 EXAMINATION

AGM314 : Introduction to Farm Mechanization

TIME ALLOWED: 3Hours

INSTRUCTION(S): Answer 4 Questions

- Q1
- a. What are the aims and objectives of farm mechanization? State 5
 - b. Give 2 examples of basic machines
 - c. Estimate the velocity ratio and the magnitude of a force to push a 25Kg bag of an inclined plane at angle 30° to the horizontal when its efficiency is 60%.

- Q5 Q2 a With suitable diagrams, explain the uses of the following workshop tools:
Round file, Screw driver, Divider, Inside Caliper and micrometer screw gauge and their uses.
- b. (a) Primary tillage
What are the meaning of
(b) Secondary tillage
- Q 3 a these terms:
c. Draw a labelled diagram of a
disc ridger
Combustion
ICE
What are the functions of
Give 2 examples of ICE
and ICE
- Q6 a b Briefly describe the followings:
Knapsack
Sprayer
Tractor
Sprayer
Aircraft
Sprayer
- Q4 a Determine the swept volume of an I.C.E. having a bore radius of 50mm and a stroke length of 124mm.
Explain the following terms used with engine:
Bottom dead centre (b.d.c.)
Engine size
Piston displacement.
- c What are the components of fixed and variable?
Compression ratio and
Stroke
b Explain the difference between Spark ignition and compression ignition