NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF AGRICULTURAL SCIENCES
SEPTEMBER/OCTOBER 2015 EXAMINATION

COURSE CODE: AGM 314:
COURSE TITLE: INTRODUCTION TO AGRICULTURE MECHANIZATION
TIME ALLOWED: Two (2) HOURS
INSTRUCTION: ANSWER ONLY FOUR (4) QUESTIONS.
ALL QUESTIONS CARRY THE SAME MARK (25 MARKS)

1a.   Define the following terms
Force
Work
Power
Torque

1b.   Differentiate between any two (2) types of power a tractor can generate for work.

2a.   Identify the four (4) major components of a power train in an engine and state their functions.

2b.   Enumerate five (5) advantages of using belts for power transmission when compared to other methods

3a.   The drive pulley rotates at 500r/min on a shaft of 10 mm diameter, which is twice (2x) as large as the driven shaft. If the driver shaft rotates at 100r/min. calculate the rpm of the driver shaft (x)

3b.   What are the standard speed of PTO operation of an agricultural tractor.

4a.   Enumerate the purpose and classification of tillage

4b.   Write short notes on the following
Disc plow
Chisel plow
Moldboard plow

5a.   What is the purpose of a planting machine and what functions are they designed to performed

5b.   Differentiate between row-crop planter and Grain drills and broadcasters.

6a.   What is the purpose of using a combine harvester, list its six (6) major functions.

6b.   What is fixed and variable cost of owning a machine. If a machine was purchased at a cost of N10,000, it has a salvage value of 10% and a useful life of 8 years. What is the annual depreciation using straight line method.