

UP BAGRI PAST PAPERS.

SIR ARTHUR LEWIS COMMUNITY COLLEGE
DIVISION OF AGRICULTURE
Academic year 2004-05

End of Semester Examination - Semester Two
Certificate Programme in Agriculture
Course: Basic Farm Machinery and Buildings BFM 107

Date: Friday May 6th, 2005.

Time: 9:00 am

Duration: 2 ½ hours

Instructions :Answer any four (4) questions.



#F16

1. (a) Indicate, separately, the uses of any **four (4)** of the following of the following.
i. Budizoe Emasculator ii. rotary tiller iii. stun gun iv. drenching gun
v. stirrup pump vi. Jab seeder
 - (b) **A company now offers a backpack mist-blower which is battery powered to farmers.**
 - (i) When is it appropriate to select a mist-blower?
 - (ii) Give the possible advantages and disadvantages of this new battery powered mistblower.
 - (c) What are the benefits of a kali to local crop production?
 - (d) Indicate farm operations that must be accomplished with human labour and indicate why humans will be employed to perform these tasks.
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2. (a) Explain fully why local farms should consider installing irrigation equipment.
 - (b) List the main or primary components of drip irrigation systems.
 - (c) Out line the function of each component of the system you have mentioned.



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- (d) Why is **controlling pressure** important for drip systems in particular?
- (e) What maintenance activities are necessary on drip systems?
- 3 (a) What are the advantages of using slats rather than solid surfaces in sheep and goat shelters?
- (b) What precautions must be taken in constructing these shelters?
- (c) What problems do prefabricated greenhouse shelters present to local farmers?
- (d) Indicate in what agricultural buildings would ceramic tiles be appropriate and why.
- (e) Detail the various uses steel finds in shelters at the college farm and give reasons why steel is appropriate in these applications.
- 4 (a) What is the function of each of the following components of petrol engines?
i. Fuel flow valve ii. carburetor iii. air cleaner iv. spark plug
- (b) List the three main requirements for a petrol engine to start.
- (c) Explain how a small engine is cooled.
- (d) What steps can a farmer take to ensure that stationary engine is adequately cooled.
- (e) How can a farmer tell the difference between 2-stroke and 4 stroke engines? Why is it important to know the difference.



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- (f) Calculate the quantity of oil that must be added to 4.5L of petrol for a two stroke engine if the mixing ratio is 24:1.
- 5 (a) Give the functions of the following sprayer parts.
i. nozzle ii. pressure chamber iii. lance iv. Magnetto
- (b) What is the advantage of piston pumps over diaphragm pumps in lever operated knapsack sprayers?
- (c) Explain the advantage of diaphragm pumps over piston pumps in these sprayers.
- (d) What are the advantages and disadvantages of using engines to operate the pump in knapsack sprayers?
- (e) Give four (4) good reasons why lever operated knapsack sprayers can be considered suitable for the small farms in saint Lucia.
- (f) What are the shortcomings of lever-operated knapsack sprayers?

