

Study Programme	: Bachelor of Industrial Studies Honours in Agriculture
Name of the Examination	: Final Examination
Course Code and Title	: AGI5364/AGX5543 Farm Power and Machinery
Academic Year	: 2021/22
Date	: 20/02/2024
Time	: 9.30 -12.30 hrs
Duration	: 3 hours



SECTION 11

Answer **any four (04)** Questions.

Answer for each question should commence from a new page.

You may spend **two (2) hours**.

1.
 - a. Briefly explain **five (05)** advantages of farm mechanization. (10 Marks)
 - b. Explain the reasons for slow progression of farm mechanization in Sri Lanka. (15 Marks)
2.
 - a. What do you understand by the term “soil tillage”? (05 Marks)
 - b. Briefly explain the **three (03)** tools/implements used in primary tillage including their uses and objectives. (10 Marks)
 - c. Briefly explain the **three (03)** tools/implements used in secondary tillage including their uses and objectives. (10 Marks)
3.
 - a. Explain the importance of a farm manager maintaining records for the agricultural operation. (05 Marks)
 - b. Briefly explain **four (04)** depreciation methods of farm machinery. (10 Marks)
 - c. Explain the method of preparing a cost record by taking a tractor as an example. You may use the cost record format for explanation. (10 Marks)
4.
 - a. Name the **two (02)** major types of cooling systems. (05 Marks)
 - b. List **three (03)** properties of a coolant. (06 Marks)
 - c. Briefly explain the working principle of the radiator cooling system. (14 Marks)

- 5.
- a. Briefly discuss the importance of the transmission system of an engine. (05 Marks)
 - b. List the **three (03)** power outputs of a tractor. (06 Marks)
 - c. Explain the process of connecting a disc plough or seeder to a four-wheel tractor and operating the equipment. (14 Marks)
6. Describe how each of the following power sources can be helpful in agriculture. (05 Marks each)
- a. Solar power
 - b. Wind power
 - c. Hydro power
 - d. Non-renewable energy sources
 - e. Animal power