

UNIVERSITY OF RUHUNA
THIRD EXAMINATION IN B.Sc AGRICULTURAL RESOURCE MANAGEMENT &
TECHNOLOGY (PART II) MAY- 2022

Training in Agricultural Machinery (EN3202)

Time: 1hour

Index No:

Answer all questions.

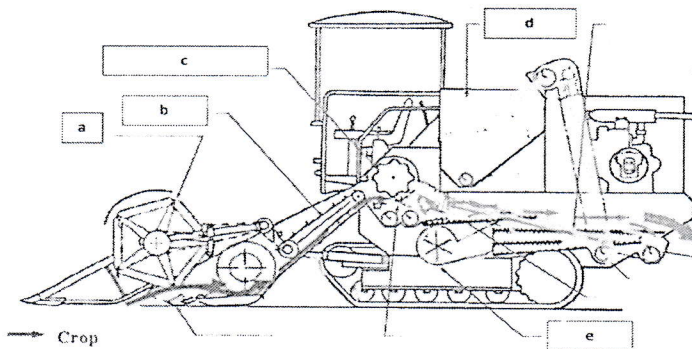
Mark the correct answer by placing “✓” for MCQ.

No calculators are permitted.

Answer all questions in the structured and theory part

Part-01- MCQ type; (30 Marks)

1. Identify A, B, C and D in the given diagram.



- a) a-Reel, b-Conveyor, c-Threshing Cylinder, d-Grain Tank, e-Blower
- b) a-Cutter Bar, b-Conveyor, c-Concave, d-Grain tank, e-Blower
- c) a-Reel, b-Conveyor, c-Concave, d-Grain Tank, e-Sieve
- d) a-Cutter Bar, b-Conveyor, c-Threshing Cylinder, d-Grain Tank, e-Sieve

2. Select the **incorrect** statement about the components of engine cooling system.

- a) Radiator is the main heat exchanger in direct type air cooling systems
- b) Lower and upper hoses are used to connect the radiator with engine
- c) Function of the radiator is transfer heat from coolant to the atmosphere
- d) Core tubes are located between tanks of the radiator

3. Which of the followings is **four-wheel** tractor operated primary tillage implement?

- a) Leveling Board.
- b) Spike tooth harrow
- c) Japanese reversible Mould board plough
- d) Disk plough

4. Which of the followings is **two-wheel** tractor operated secondary tillage implement?
- a) Disk harrow
 - b) Tine Tiller
 - c) Blade harrow
 - d) Japanese reversible Mould board plough
5. Select the capacity of the fuel tank of Kubota K75 power tiller
- a) 6.0L
 - b) 6.5L
 - c) 7.5L
 - d) 8.0L
6. Select the engine oil type of Kubota K75 power tiller
- a) S.A.E. 30 or 40
 - b) S.A.E. 50 or 60
 - c) S.A.E. 70 or 80
 - d) S.A.E. 90 or 100
7. Select the gear box oil type of Kubota K75 power tiller
- a) S.A.E. 30
 - b) S.A.E. 40
 - c) S.A.E. 60
 - d) S.A.E. 90
8. Decompression lever is used to,
- a) make starting of the tractor is easier
 - b) application break for wheels
 - c) operate the clutch mechanism
 - d) power transmission from tractor to rotovator
 - e) operate steering clutch lever
9. Number of cylinders available in the engine of KUBOTA **two-wheel** tractor model K75 is
- a) 5
 - b) 4
 - c) 3
 - d) 1
10. The main function of a throttle lever is,
- (a) to start the tractor
 - (b) to change the gear
 - (c) to steering of tractor
 - (d) to accelerate and decelerate the engine

Part-02- Sstructured type (35 Marks);

1. Write down the functions of following levers in two-wheel tractors.

a) Main clutch lever

b) Speed change lever

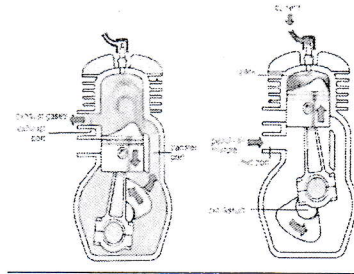
c) Blade speed change lever

d) Steering clutch levers

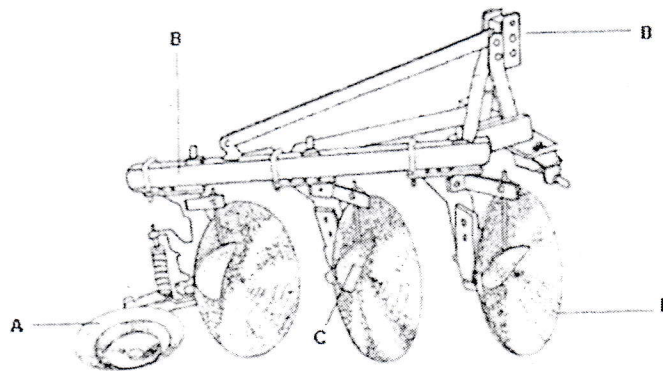
e) Throttle lever

Part-03- Essay type (35 Marks);

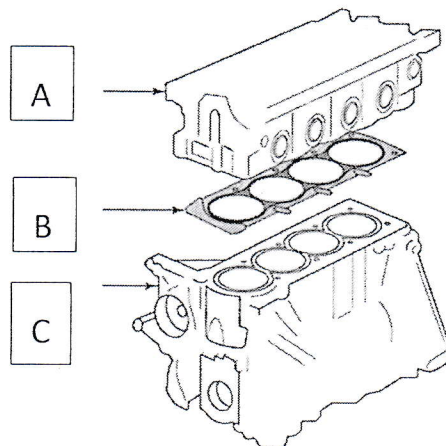
1. Briefly explain the function of a **Crank shaft** in Internal Combustion engines.
2. Identify the following engine cycle and briefly describe .



3. What is the purpose of lugs type tyres?
4. Identify the functions of following plough parts.



5. A view of an engine components is shown in the following figure.



Briefly explain the functions of the component 'B'.