KERALA AGRICULTURAL UNIVERSITY

B.Sc Hons (Ag) 2012 Admission

II nd Semester Final Examination- August/September -2013

Cat. No: Engg.1202

Title: Farm power and machinery (1+1)

Marks: 80
Time: 3 hours

I a) Fill up the blanks

(10 x 1=10)

1. Bullock can pull _____% of their body weight.

2. In Kerala, farm size is mostly _____type.

3. Power capacity range of a power tiller _____H.P.

4. Light power tillers are used in _____areas.

5. Full form of CI Engine is_____

6. For a 4-S engine, in _____and _____ strokes both the valves remain closed.

7. For a 100 rpm 2-Stroke engine , number of power strokes /min_____

8. Range of compression ratio in petrol engine_____

9. Push rods transfer motion to valves via_____

10. Disc plough is generally used for _____ tillage.

II Write short notes on ANY TEN

(10 x 3=30)

1. Utilization of solar energy on farms.

2. Mounted type implements.

3. Side draft.

4. Firing order.

5. Coulter and jointer.

6. Three point linkage.

7. Valve operating mechanism.

8. Differentiate primary and secondary tillage.

9. Offset harrow.

10. Differentiate between disc angle and tilt angle.

11. Differentiate between vertical and horizontal suction.

12. Differentiate between four stroke and two stroke cycle engines.

III Write short essays on ANY SIX of the following

(6 x5=30)

1. What is a rotavator? Write down its advantages.

2. Define registration and alignment .Explain the working of a paddy reaper.

3. A4 cylinder 4 stroke engine has cylinder diameter of 25 cm ,stroke bore ratio 1.8 ,clearance volume 4500 cm^3 ,engine speed 250 rpm ,mean effective pressure 6.8 k.g /sq.cm ,and mechanical efficiency 75% .Calculate IHP .BHP .Compression ratio and swept volume.

4. Which are the different types of sprayers? Describe the working of a ULV sprayer.

5. Schematic flow diagram of fuel system.

6. Tractor power transmission system.

7. Seed metering devices.

8. Types of Furrows made by MB Plough.

IV Write essay on ANY ONE

(1 x10=10)

1. Tractor cooling system.

2. Working principle of SI Engine.

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