

# KERALA AGRICULTURAL UNIVERSITY

B.Tech (Agrl.Engg.) 2012 & Previous Admissions

2013  
One Time Re-examination- January-2017

Cat. No: Fpme.2209.

Title: Farm Power (2+1)

Marks: 50.00

Time: 2 hours

## I Fill up the blanks

1. Conversion of heat to mechanical energy is associated with ----- law of thermodynamics. (10x1=10)
2. Scale of Cetane number represents the blends of two -----
3. Excess black smoke in the exhaust is the indication of -----
4. The purpose of the starting motor is to -----
5. Clearance of a tractor is the distance from ground to the lowest part of the -----
6. One possible firing order for a six cylinder engine -----
7. In a four stroke cycle engine cam shaft rotates at ----- the speed of crank shaft.
8. The purpose of carburetor is to -----
9. Frictional horse power is the difference between -----
10. Commercial specification of tractor power is based on ----- power.

## II Write short notes on any FIVE

1. Name the types of piston rings and write their functions. (5x2=10)
2. Classify different types of internal combustion engines.
3. Draw and label the valve timing diagram of a 4-stroke cycle engine.
4. Why CI engines are comparatively of higher size?
5. Write the purpose of an engine governor.
6. What is the function of a radiator in cooling system?
7. Write notes on tractor starting motor.

## III Write short answers on any FIVE

1. Differentiate between CI and SI Engines. (5x4=20)
2. Explain the valve operating mechanism with a figure.
3. Explain thermosiphon cooling system.
4. Explain briefly the properties of coolant.
5. With diagram, explain the functions of timing gear.
6. Briefly explain different types of air cleaning systems.
7. Write the functions of - cam shaft, push rod and timing gears.

## IV Write essay on any ONE

1. Forced circulation cooling system. (1x10=10)
2. Working principle of a centrifugal governor.

\*\*\*\*\*