

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD  
SEMESTER END EXAMINATION

B.Sc. (Hons.) A.B.M.

Semester	: IV (New)	Term	: II	Academic Year	: 2018-19
Course No.	: ENGG 243	Title	: Farm Power and Machinery		
Credits	: 2 (1+1)	Time	: 14.00 to 16.00	Total Marks	: 40
Day & Date	: Saturday, 04.05.2019				

- Note :
1. Solve ANY EIGHT questions from SECTION "A".
  2. All questions from SECTION "B" are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 Enlist different sources of farm power. Write merits and demerits of mechanical power.
- Q.2 Write down the difference between diesel and petrol engine.
- Q.3 A four cylinder 4 stroke gas engine has cylinder diameter of 25 cm, stroke bore ratio is 1.8, clearance volume is 4500 cm<sup>3</sup>, engine speed is 240 rev/min, mean effective pressure is 700 kPa and mechanical efficiency is 75%.  
Calculate a) ip, b) bp, c) compression ratio, d) swept volume.
- Q.4 Explain in detail about lubrication system of I.C engine.
- Q.5 Define tillage. What are the different objectives of tillage?
- Q.6 Write in detail about seed cum fertilizer drill.
- Q.7 Write short notes. (Any Two)
- a) Components of engine b) Stroke Bore Ratio  
c) Hand atomizer
- Q.8 Define cultivator. Give its types and explain any one.
- Q.9 Define harvesting. Enlist different types of mower and explain cylinder mower.
- Q.10 Find the cost of using a tractor per hp-hr when the cost of 35 hp tractor is Rs. 300000, life of tractor is 10 yr, rate of interest is 10% and working hours per year is 1000 hours.

SECTION "B"

- Q.11 Define the following terms.
- 1) Stroke 2) Scavenging 3) Tractor 4) Power
- Q.12 Give full forms of the following.
- 1) LDO 2) HSD 3) BDC 4) TDC

