

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agrl.)

Semester	: V (New)	Term	: I	Academic Year	: 2012-13
Course No.	: ENGG 353	Title	: Farm Power and Machinery		
Credits	: 2(1+1)	Time	: 14.00 to 16.00	Total Marks	: 40
Day & Date	: Wednesday, 31.10.2012				

- 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"

1. Enlist and explain different sources of farm power available in India. ✓
2. Explain four stroke cycle engine with the help of neat diagrams. ✓
3. Calculate BHP and mechanical efficiency of 4 stroke, 4 cylinder I.C. engine having cylinder diameter 12.5 cm, stroke length 15 cm, engine speed 1000 rpm, mean effective pressure 7 kg/cm², frictional HP of engine is 30 HP. ✓
4. Define tractor. Write the points to be considered while selecting the tractor. ✓
5. Define tillage. Write the different objectives of tillage. ✓
6. Calculate area covered per day of 8 hrs by a tractor drawn 4 bottom, 35 cm M.B. plough if speed of ploughing is 6 kmph. Time lost in turning is 6%. ✓
7. Enlist different sowing methods. Write the detail procedure of calibration of seed drill. ✓
8. Write the detail classification of different plant protection equipments. ✓
9. Enlist different harvesting equipments. Explain sickle with the help of neat diagram. ✓
10. Write short notes on (Any Two)
 - 1) Air cleaner ✓
 - 2) Planter ✓
 - 3) Equipments for land development ✓

SECTION "B"

11. Define the following terms.
 - 1) Bore
 - 2) Compression ratio
 - 3) Seed metering
 - 4) Threshing
12. State True or False.
 - 1) A strong healthy man can develop 0.1 HP. ✓
 - 2) Depreciation is an item included under operating cost. ✗
 - 3) Cultivator is a primary tillage implement. ✗
 - 4) Sprayer is a machine used to apply chemicals in powder form. ✗

