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B.E. / B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013

AGRICULTURAL AND IRRIGATION ENGINEERING BRANCH

SIXTH SEMESTER – (REGULATION 2008)

AI 9351 Tractor and Farm Equipments

16

Time : 3 hr

Max Marks : 100

Answer ALL Questions

Part – A (10 x 2 = 20 Mark)

1. Differentiate internal combustion engine from external combustion engine.
2. Define knocking.
3. List out the basic functions of a gear box
4. What is the common ply rating of tyres used in agriculture operations?
5. Write the two distinct features of power tiller.
6. List the types of harrows.
7. Write the different types of tillage.
8. A 3 x 30 cm plough is moving at a speed of 4 km/h. calculate how much time it take to plough 500 x 500 m field when the field efficiency is 70 %?
9. Write the regular maintenance of tractor after 8 hours of work.
10. List the different renewable energy sources

Part – B (5 x 16 = 80 Mark)

11. i) Explain the different components of engine types (8)
ii) Write short notes on basic engine strokes with sketch (8)
12. a. i) Discuss the working principle of hydraulic system in tractor with sketch (10)
ii) Write about functions of steering system in tractor (6)

OR

- b. i) Explain the different types of brakes with sketch in tractor (8)
ii) Write the common engine troubles and their remedies in tractor (8)
13. a. i) Describe the use of power tiller in agriculture operations (10)
ii) Write short notes on bulldozer track and blade adjustments. (6)

OR

- b. i) Discuss the merits and demerits of using more machinery in agriculture in your point of view. (16)

14. a.i) Explain the working principles and components of Threshers.(16)

(OR)

b.i) Discuss the different types and uses of dusters. (10)

ii) Write short notes on mould board plough. (6)

15. a. i) Explain the overhead cost estimation procedure for Farm machineries (10)

ii) Describe the seed drill equipment (6)

(OR)

b.i) Write merits and demerits of the non conventional energy sources. (16)