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B.E /B.Tech (FULL TIME) END SEMESTER EXAMINATION APRIL/MAY 2019
B.E AGRICULTURAL AND IRRIGATION ENGINEERING
SEMESTER - II
AI 8201 – PRINCIPLES OF AGRICULTURAL AND IRRIGATION ENGINEERING
(Regulation 2012)

Time: 3 Hours

Answer ALL Questions
(11th question is compulsory)
PART-A (10 x 2 = 20 Marks)

Max. Marks 100

1. List any four dominant factors which are responsible for soil erosion?
2. Sketch a typical watershed and mark components.
3. What is meant by available water present in a soil column? Show with a neat sketch.
4. List any six important agro meteorological instruments and mention the parameters measured by them
5. What is a silo mention its use?
6. What type of implements are used for sowing seeds of paddy and groundnut?
7. What is walking tractor? What types of farms need them?
8. What is the difference between ice cream and frozen desserts?
9. List four plants from which bio fuels can be made.
10. List four products made out of agricultural waste.

Part – B (5 x 16 = 80 marks)

11. i) Explain the land capability classification. . (7 Marks)
ii) With neat sketch show temporary and permanent gully control structures. . (9 Marks)
- 12.a) i) What are the types of irrigation methods? (6 Marks)
ii) Briefly explain about each one with suitable crops slope and adaptation. (10 Marks)
(OR)
- 12.b) What are green house, explain it under following headings;
i) Suitability and cost
ii) Crops and crop cultivating structures.
iii) Irrigation in green houses.
- 13.a) i) Describe the constructional features of compression. ignition engines used in farm tractors. (8 Marks)
ii) List various implements that are hitched to a tractor and what farm operations do they perform. (8 Marks)
(OR)
- 13.b) i) Classify various types of sprayer and explain any one of them in detail. (7 Marks)
ii) What is a combine harvester? Draw a neat sketch and mark the parts. (9 Marks)
- 14.a) i) Explain in detail the processing of cheese with a flow chart. (7 Marks)
ii) What is pasteurization and homogenization in processing of milk and why? (9 Marks)
(OR)

(P.T.O)



14.b) What are the process of post harvest of paddy? Explain with a flow chart.

15.a) i) With a neat sketch explain working of a solar cooker.

(8 Marks)

ii) How wind energy can be harvested in a farm?

(8 Marks)

(OR)

15.b) Define biomass. Explain the working of a gasifier with a neat sketch.

