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B.E (Full Time) DEGREE AND SEMESTER EXAMINATIONS, NOV/DEC 2012

AGRICULTURE AND IRRIGATION ENGINEERING BRANCH

SECOND SEMESTER-(REGULATION 2008)

PH9163 PHYSICS FOR AGRICULTURE AND IRRIGATION ENGINEERING

Time: 3hr

Max

Mark: 100

Answer All Questions

Part – A (10x2=20 Mark)

1. What is directly and indirectly ionizing radiation?
2. Define three general categories and dose ranges of food irradiation?
3. Write short notes on Bremsstrahlung radiation?
4. What are the application of different biophysical method in plant production?
5. Explain “Slaking” and “Dispersion”?
6. Write short notes on soil compaction?
7. Define radiant energy, radiant power and radiant flux?
8. Define Spectral signature?
9. Define Cellular Respiration?
10. Define photosynthesis?

Part – B (5x16=80 Mark)

11. Explain in detail the three types of interaction of ionizing radiation?
12. a) Explain in detail the effects and application of new biophysical method in agriculture?
or
b) Explain in what way environment is protected by new application in agriculture using biophysical method?

(P.T.O)

13. a) Explain in detail Soil profile?

or

b) Discuss in detail about volume and mass relationship of soil constituents?

14. a) Explain distribution of radiant energies in electromagnetic spectrum?

or

b) Describe and discuss about remote sensors and explain Pattern recognition?

15. Describe in detail the structure of chloroplast and photosynthetic membrane?

or

Discuss in detail C₄ pathway and carbon cycle?
