Reg. No. : | | | | | | | | | | |

Question Paper Code: 31679

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Seventh Semester

Instrumentation and Control Engineering

01UIC907 - INSTRUMENTATION FOR AGRICULTURE

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Mention the significance of Instrumentation in food processing.
2. List the parameters that ensure relevant food quality.
3. Define the term resistivity of soil.
4. Write short note on ion concentration measurement in soil.
5. Differentiate between continuous and batch process.
6. Outline the importance of evaporator control in a sugar plant.
7. List the applications of SCADA.
8. Draw the schematic of computer control system.
9. Point out the merits and demerits of biosensors.
10. State the terms humidity and moisture.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the working principles of Biosensors utilized in the areas of food processing and agriculture. (16)

Or

(b) Describe in detail about the importance of various food quality standards. (16)

12. (a) Illustrate the role of instrumentation in controlling seed germination and growth. (16)

Or

(b) Analyze the various techniques employed for soil analysis. (16)

13. (a) Sketch and explain the operation of instrumentation in sugar industries. (16)

Or

(b) Sketch and explain the operation of instrumentation in oil extraction industry. (16)

14. (a) Discuss in detail about the supervisory control followed in agriculture process. (16)

Or

(b) Explain application of SCADA system of water distribution and management controls. (16)

15. (a) Explain in detail about agro metrological weather systems. (16)

Or

(b) Define green house gases and discuss green house technology and its applications. (16)

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