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B.TECH. DEGREE EXAMINATION, NOVEMBER 2014

Eighth Semester

Branch : Applied Electronics and Instrumentation Engineering/Electronics and Instrumentation Engineering

AI 010 802/EI 010 802—INSTRUMENTATION IN PROCESS INDUSTRIES

(New Scheme—2010 Admissions—Supplementary)

Time: Three Hours

Maximum: 100 Marks

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Part A

Answer **all** questions.

Each question carries 3 marks.

- 1. Write a short note on reactor control states with block diagram.
- 2. What all are use of density and moisture analyzer in food processing industry?
- 3. Describe strand casting in iron and steel industry.
- 4. Draw the computer control technique block diagram in paper industry.
- 5. Explain sterilization with sterilization technique classification.

 $(5 \times 3 = 15 \text{ marks})$

Part B

Answer all questions.

Each question carries 5 marks.

- 6. Make a short description on reflux and reboiler control in distillation operation.
- 7. List out the details on gravimetric solid feeder with diagram.
- 8. Explain the use of goggle valve in iron and steel industry.
- 9. Make a brief description on the principle and operation of nuclear spectrum anlayzers.
- 10. Discuss tablet coating controls in pharmaceutical industry with diagram.

 $(5 \times 5 = 25 \text{ marks})$

Part C

Answer all questions.

Each full question carries 12 marks.

11. With the help of neat diagrams, explain heat exchanger in detail.

Or

12. Explain the use of dryers in process industry with batch and continuous dryers.

Turn over

13. Describe the process in food industry with any one example.

Or

- 14. Make a detailed discussion on the measurement hardware used in the food processing industry.
- 15. Describe the computer application in iron and steel industry.

Or

- 16. Explain about the measurement hardware in the iron and steel industry.
- 17. Discuss the computer application in paper industry.

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- 18. Describe the reactor control system in nuclear industry.
- 19. Discuss the measurement hardware in pharmaceutical industry.

Or

20. Explain the control of chemical reactors in pharmaceutical industry.

 $(5 \times 12 = 60 \text{ marks})$