Code: 9A02805

R09

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations, July 2013
PLC & DCS-ITS APPLICATIONS
(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 (a) With block diagram, explain the layout and various connections of PLC system.
  (b) Explain in detail various I/O modules of programmable logic controllers.

2   Explain in detail the following:
  (a) PLC input instructions.
  (b) PLC outputs.
  (c) Operational procedures.

3   Explain in detail the operational steps of spray process system and draw ladder logic diagram flow chart for its control problem.

4   Explain the following in detail:
  (a) Single and group input registers.
  (b) Single and group output registers.

5   With an industrial application example explain the timer and counter functions of PLC.

6   Discuss in detail the following data handling functions of PLC.
  (a) SKIP.
  (b) JUMP.
  (c) MOVE.
  (d) FIFO.

7   What is meant by distributed control systems? Explain in detail different architectures of DCS.

8   Explain the role of distributed control systems in power plants.

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