



GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

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Name of Examination : **Summer 2021** - (Preview)

Course Code & Course Name : **IN352U - Distributed Control System**

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Maximum Marks : **60**

Duration : **3 Hrs**

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Answer Key Submission Type: No marking scheme and solution

Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

- 1) Attempt any two sub questions.
 - a) Draw the block diagram of PLC and explain with its specifications. [6]
 - b) Describe input and output module of PLC. [6]
 - c) What is need of interfacing ? Explain PLC interfacing with hydraulic system. [6]
- 2) Attempt any two sub questions.
 - a) What are role of timers and counters in PLC. Explain in detail with example. [6]
 - b) Draw ladder diagram for bottle filling plant and explain it. [6]
 - c) Write difference between DCS and centralized computing system. [6]
- 3) Attempt any two sub questions.
 - a) Draw block diagram of DCS and explain it. [6]
 - b) Describe different type of displays in DCS . [6]
 - c) Explain field bus with its advantages and disadvantages. [6]
- 4) All sub questions are compulsory.
 - a) Draw block diagram of SCADA and explain it. [6]
 - b) Write a short note on development of mimics using RSVIEW32 SCADA package. [6]
- 5) All sub questions are compulsory.
 - a) What is HART protocol? Explain it with diagram. [6]
 - b) Explain DCS and SCADA in paper plant process industry. [6]

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