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**Question Paper Code: 57503**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Seventh Semester

Electronics and Instrumentation Engineering

15UEI703 - INDUSTRIAL AUTOMATION

(Regulation 2015)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

1. Choose the robot component from the following: CO1-R  
(a) microcomputer      (b) coaxial cable      (c) arm      (d) software
  
2. \_\_\_\_\_ is primarily concerned with logical control focussed on individual machines and the logical linkage between machines and devices. CO1-R  
(a) Micro Automation      (b) Programmable Automation  
(c) Flexible Automation      (d) Fixed Automation
  
3. \_\_\_\_\_ provides flow controls and directional control functions in a single valve. CO2-R  
(a) Transmitter      (b) Internet Protocol      (c) I/P Converter      (d) RS 32 Protocol
  
4. The voltage to current converter photosensitive device can be used as CO2-R  
(a) Light intensity meter      (b) Light radiating meter  
(c) Light deposition meter      (d) None of the mentioned
  
5. \_\_\_\_\_ is used for interfacing and computing functions and also provides the means of communication between the other devices. CO3-R  
(a) Local control unit      (b) Distributed control system  
(c) Process control system      (d) operator interface

6. Circuit switched connection is provided for CO3-R  
 (a) Voice (b) Data (c) a & b (d) None of the above
7. DCS integrates speech and data on CO4-R  
 (a) Different lines (b) Same lines  
 (c) Different & Same lines (d) None of the mentioned
8. In distributed systems, link and site failure is detected by \_\_\_\_\_. CO4-R  
 (a) polling (b) handshaking  
 (c) token passing (d) none of the mentioned
9. \_\_\_\_\_ is a computer based control system CO5-R  
 installed in that controls and monitors the mechanical and electrical  
 equipment.  
 (a) Energy management (b) Building Automation System  
 (c) Intergated System (d) Process Control System
10. A Building automation system is also known as CO5-R  
 (a) Structural automation (b) Building Control  
 (c) manipulator (d) servomechanism

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Discuss briefly about the hierarchical levels in industrial automation CO1-U (8)  
 systems
12. Define and explain the working principle of Transmitter and its CO2-U (8)  
 applications?
13. Define DCS. With a neat sketch, explain various types of plant layouts CO3-U (8)
14. Compare Low level and high level interfaces in DCS CO4-U (8)
15. Write notes on : CO5-U (8)  
 Energy management functions

