

Roll No.

Total Pages : 3

109803

May 2019

B.Tech. VIII Semester (Under CBS)

AUTOMATIC CONTROLS

(MU-406)

Time : 3 Hours]

[Max. Marks : 60

LT-04

Instructions :

- (i) *It is compulsory to answer the questions of Part-A. Limit your answers within 20-40 word in this part*
- (ii) *Answer any four questions from Part-B in detail.*
- (iii) *Different parts of the same question are to be attempted adjacent to each other.*
- (iv) *Assume suitable standard data wherever required, if not given.*

PART-A

1. (a) What are different types of automation? (2)
- (b) What are sensors? (2)
- (c) What is pressure switch? (2)
- (d) Explain Hydraulic actuators. (2)
- (e) What is difference between Digital and Analog control. (2)
- (f) Explain PLC operating cycle. (2)

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- (g) What are different types of conveyors? (2)
(h) What are key benefits of Co-ordinate Measuring Machine? (2)
(i) Explain the Flexible inspection system. (2)
(j) What is LAN and WAN? (2)

PART-B

2. (a) What is automation? What is the need of automation in industry? (5)
(b) What are basic elements of an automated system? Explain in detail. (5)
3. (a) Explain various components of automation in detail. (4)
(b) Explain desirable features for selecting measuring devices used in automated systems. (3)
(c) Explain various components of vision system. (3)
4. (a) Define Programmable logic controllers. What are significant advantages in using a PLC rather than conventional relays. (5)
(b) Explain the basic components of PLC with neat sketches. (5)
5. (a) Explain the principles of material handling systems. (5)

- (b) Explain the automated guided vehicle system for material handling. (5)
6. What is Co-ordinate Measuring Machine? Explain the construction of CMM with neat
- (a) Sketches. (5)
(b) What is an FMS? What makes it flexible? Explain types of flexibility in manufacturing. (5)
7. Write short notes on :
- (a) Communication networks. (5)
(b) Interface standards. (5)
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