SSLC, HSE, DIPLOMA, B.E/B.TECH, M.E/M.TECH, MBA, MCA

Notes   *Available @*
Syllabus
Question Papers   www.AllAbtEngg.com
Results and Many more…

Reg. No. :

Question Paper Code : 92219

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019
Sixth Semester
Robotics and Automation Engineering
RO 6602 – AUTOMATION SYSTEM DESIGN
(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions

PART – A   (10×2=20 Marks)

1. List down the individual components in an automation system.

2. Is it possible to automate a batch production unit ? List two difficulties in accomplishing it.

3. Write the purpose of storage buffers in automated assembly.

4. Write the abbreviation for, (a) RFID system (b) AGVs.

5. Draw the symbol for, (a) Double rod cylinder (b) Pressure reducing valve.

6. List the types of Directional Control Valves.

7. List the various stages in mechatronic system design.

8. State any two advantages of CIM.

9. List two sources of heat in a hydraulic system.

10. Draw the hydro-mechanical servo system.

PART – B   (5×13=65 Marks)

11. a) Discuss in detail the various levels of automation.

    (OR)

    b) Explain the concept of Reconfigurable Manufacturing System (RMS).

12. a) Explain how RFID can be utilized to improve automation.

    (OR)

    b) With neat sketch explain the various types of automated assembly systems.

92219

13. a) Explain the construction and working of a 5/2 DCV in a pneumatic system and draw the various actuation modes to actuate these DCVs.

(OR)

b) Explain with a neat sketch the working of any one type of air hydraulic equipment.

14. a) Explain the various equipment and mechanism used in design for high speed feeding and orienting with examples wherever required.

(OR)

b) Design a mechatronic system for pick and place application with neat sketch.

15. a) Write briefly on any 6 major maintenance issues in hydraulic systems.

(OR)

b) With a neat sketch explain the elements of the hydraulic power pack.

PART – C   (1×15=15 Marks)

16. a) Design the Electro pneumatic circuit for the sequence A1 C1 B0 A0 B1 C0.

(OR)

b) Discuss in detail about sequence valve with a neat sketch. Also explain the application circuit of sequence valve.

_____