Total No. of Questions : 12]

SEAT No. :

P2681

[Total No. of Pages :2

[5154]-52

B.E. (Mechanical)

INDUSTRIAL AUTOMATION

(2008 Course) (Open Elective-IV)(Semester-II)

Time : 3 Hours] *[Max. Marks :100*

Instructions to the candidates:

1) ***Answer two sections should be written in separate answer books.***
2) ***Answer any three questions from each section.***
3) ***Figures to the right indicate full marks.***
4) ***Assume Suitable data if necessary.***

SECTION-I

Q1) a) Explain pressure converter & TRANSMITTER. **[8]**

b) Explain primary and secondary transducer. **[8]**

OR

Q2) a) Explain FMS in detail. **[8]**

b) Explain Transducer with temperature measurment. **[8]**

Q3) a) Explain Dynamic characteristics of Mechanics in Industrial Automation. **[8]**

b) Explain PLC Diagram for Industrial Application. **[8]**

OR

Q4) a) Draw ladder diagram with Ex-on, Ex-off and PLC output symbol. **[8]**

b) Discuss in brief DCS. **[8]**

Q5) a) Discuss in brief advantages of CNC machines used in FMS. **[8]**

b) Write note on FMS. **[10]**

OR

Q6) a) Discuss the role of SCADA in Industrial automation. **[8]**

b) Explain Direct numerical control. **[10]**

P.T.O.

SECTION-II

Q7) a) Explain in brief features & Configuration of HMI. **[8]**
b) Discuss the role of SCADA in Industrial Automation. **[8]**

OR

Q8) a) Explain in brief stepper motor used in control element in automation. **[8]**
b) Explain selection criterions of BLDC used as prime mover in speed control application. **[8]**

Q9) a) Explain stepper motor applications in Industrial Automation. **[8]**
b) Explain role of HMI used in PLC. **[8]**

OR

Q10)a) Explain Automation in welding. **[8]**
b) Discuss use of automation with repect to elevator such as used in material handling equipment. **[8]**

Q11)a) Write a note on Remote centre of compliance. **[8]**
b) Explain automation in hydraulic press. **[10]**

OR

Q12)a) Explain Hydraulic CKT used in Industrial Automation. **[10]**
b) Explain DNC. **[8]**

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