Total No. of Questions : 4]

SEAT No. :

**PC-435**

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# [6359]-555

## S.E. (Robotics and Automation Engineering) (Insem.)

## INDUSTRIAL ELECTRONICS AND ELECTRICAL TECHNOLOGY (IEET)

## (2019 Pattern) (Semester - III) (211501)

*Time : 1 Hour]* *[Max. Marks : 30*

***Instructions to the candidates :***

1) ***Solve Q.1 or Q.2, Q.3 or Q.4.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Assume suitable additional data, if necessary.***
5) ***Use of non-programmable calculator is allowed.***

***Q1)*** a) Explain the role of Embedded system in the context of industrial automation? **[7]**

b) Distinguish between microcontroller and microprocessor considering significant features. **[8]**

OR

***Q2)*** a) What are the features of Arduino IDE platform? **[7]**

b) Draw the block diagram illustrating the components of data acquision system and briefly explain the function of each block. **[8]**

***Q3)*** a) Explain following functions related to serial communication **[7]**

i) serial.begin (baud rate);
ii) serial.available ();
iii) serial.print (value);
iv) serial.println (value);
v) serial.read ();
vi) serial.write ();
vii) serial.end ()

b) Draw and explain interfacing of LED with Arduino. **[8]**

OR

***Q4)*** a) Explain timers in ATMega328P. **[7]**

b) Draw and explain interfacing of LCD with Arduino. **[8]**

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