6633

BOARD DIPLOMA EXAMINATIONS

SEPTEMBER/OCTOBER-2020

DECE–FIFTH SEMESTER

INDUSTRIAL ELECTRONICS

Time: 3 hours   Max. Marks: 80

PART – A   3 X 10 = 30

Instructions: 1.   *Answer **all** questions.*
2.   *Each question carries **Three** Marks.*
3.   *Answer should be brief and straight to the point and should not exceed five simple sentences.*

1.   Define intrinsic stand-off ratio of UJT.

2.   Draw volt-ampere characteristics of DIAC.

3.   What is the purpose of SMPS?

4.   Define UPS and classify them.

5.   State the working principle of LVDT.

6.   Define Piezo-electric effect.

7.   Classify industrial heating methods.

8.   Write any three applications of dielectric heating.

9.   State the Need of PLC.

10. List the merits and demerits of open loop control system.

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Instructions: 1.   *Answer any* **Five** *questions*
                   2.   *Each question carries* **TEN** *Marks.*
                   3.   *Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.*

11.   Explain the construction and working of TRIAC with VI characteristics.

12.   Draw two – transistor model of SCR and explain its working with VI characteristics.

13.   Explain the construction and working of UJT in negative resistance region.

14.   a) State the need of an inverter.   3M

       b) Explain the working of MOSFET based inverter circuit.   7M

15.   What is a transducer? Explain the construction and working principle of potentiometric transducer.

16.   Explain the working principle of

       a)   Accelerometer.   5M

       b)   Tacho-generator.   5M

17.   Explain the basic circuit of AC Resistance welding and Explain its working.

18.   Draw the block diagram of Closed Loop system and explain its working.

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