

B.Tech III Year II Semester (R15) Regular Examinations May/June 2018

INDUSTRIAL ELECTRONICS
(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Distinguish between intrinsic semiconductor and extrinsic semiconductor.
 - (b) Explain about majority carriers in n type semiconductors.
 - (c) Define emitter efficiency.
 - (d) Explain about the static characteristic curves of CB configuration.
 - (e) Distinguish between full wave rectifier and bridge rectifier.
 - (f) Give the classification of type of filters.
 - (g) Mention the applications of induction heating.
 - (h) Explain the principle of resistance heating.
 - (i) What are the chemical effects of ultrasonics?
 - (j) Define ultrasonic dyeing.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Explain about the formation of PN junction.

OR

- 3 Confer the working of LED and mentions its applications.

UNIT – II

- 4 Explain the working of transistor as an amplifier.

OR

- 5 Explain the input and output characteristics of a transistor in CB configuration.

UNIT – III

- 6 Describe the working of full wave rectifier with and without filters.

OR

- 7 Derive an expression for the ripple factor in a half wave rectifier.

UNIT – IV

- 8 Illustrate the process of resistance welding and energy storage welding.

OR

- 9 Mention the applications of dielectric heating.

UNIT – V

- 10 Discuss about Ultrasonic flaw detection and colloidal effect.

OR

- 11 Contrast about physico-chemical and thermal effects of ultrasonic.
