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BOARD DIPLOMA EXAMINATION, (C-14)
JUNE-2019
DAEI- THIRD SEMESTER EXAMINATION
ELECTRONIC DEVICES AND APPLICATIONS

Time: 3 Hours

Max.Marks: 80M

PART- A

3 × 10 = 30M

Instructions: 1) Answer **all** question
2) Each question carries **three** marks
3) Answers should be brief and straight to the point
and shall not exceed five simple sentences.

- 1) State the electrical properties of solid semiconductor materials.
- 2) List any three applications of Diode.
- 3) Define rectification.
- 4) Draw the construction symbols of transistors.
- 5) List any three applications of transistor.
- 6) State the classification of FETs.
- 7) List the types of MOSFETs.
- 8) List different thyristor family devices.
- 9) Draw the volt-ampere characteristics of SCR.
- 10) List any three applications of operational amplifier.

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PART- B

5 × 10 = 50M

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Instructions: 1) Answer any **five** questions
2) Each question carries **ten** marks.
3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11) Explain the formation of PN junction Diode.
- 12) Explain the working of Half-Wave Rectifier with waveforms.
- 13) (a) State differences between Intrinsic and Extrinsic semiconductors. 5M
(b) Compare ICs with discrete component circuits. 5M
- 14) Explain the working of NPN transistor.
- 15) Derive the relationships between alpha, beta and gamma factors.
- 16) Explain the construction and working of JFET.
- 17) Explain the construction and working of TRIAC.
- 18) Explain the working of SCR.

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