

C 2312 A

B.Sc. (Three Year) DEGREE EXAMINATION, MARCH/APRIL 2017.

End Semester Examination

Second Semester

Part II : Electronics

ELECTRONIC DEVICES AND CIRCUITS

Time : 3 Hours

Max. Marks : 70

PART — A

Answer any FIVE of the following questions. **(5 × 4 = 20 Marks)**

1. Explain barrier potential of a P-N junction.
2. Discuss voltage-divider bias method.
3. Explain two transistor representation of SCR.
4. What are opto-isolators?
5. Explain the working of choke input filter.
6. Explain transistor as a switch.
7. Explain the working of photo diode.
8. Explain the list of 79XX voltage regulator.

PART — B

Answer ALL the following questions. **(5 × 10 = 50 Marks)**

9. (a) Explain the construction and working of tunnel diode with V-I characteristics.

Or

- (b) Explain the operation of zener-diode and its V-I characteristics. Give one application of Zener diode.
10. (a) Explain and analyse the hybrid equivalent circuit of CE transistor.

Or

- (b) Explain the input and output characteristics of common base configuration.

Turn Over

11. (a) Explain the construction and working of JFET with the help of drain and transfer characteristics.

Or

- (b) Explain the construction and working of UJT with V-I characteristics.

12. (a) Explain the construction and working of a photo transistor.

Or

- (b) Explain IR emitters with a neat circuit diagram.

13. (a) Explain the working of bridge rectifier and derive expression for ripple factor and efficiency.

Or

- (b) Discuss Switch Mode Power Supply (SMPS).
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