

C 2312

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

(End Semester Examination)

Second Semester

Electronics

Paper II : ELECTRONIC DEVICES AND CIRCUITS

(Old Syllabus)

Time : 3 Hours

Max. Marks : 70

PART — A

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

1. Explain the working of a varactor diode.
2. Discuss transistor as a switch.
3. Explain output characteristics of depletion MOSFET.
4. Explain the working of photo diode.
5. Discuss L-section filter working.
6. Explain the effect of temperature on reverse saturation current.
7. Explain the concept of voltage amplification.
8. Compare FET and BJT.

PART — B

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

9. (a) Explain the working of P-N junction in forward and reverse bias condition with the help of the V-I characteristics.
Or
(b) Explain the working and V-I characteristics of Tunnel diode.
10. (a) What is a transistor? With the help of input and output characteristics explain the working of CE configuration.
Or
(b) What are the current components in BJT? Explain BJT static characteristics (Input and Output).

Turn Over

11. (a) Explain the transfer and output characteristics with the help of a FET circuit.

Or

(b) Explain the transfer and output characteristics of enhancement MOSFET.

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

Or

(b) Explain the construction and working of LCD.

13. (a) Explain the working of full wave rectifier. Derive expressions for efficiency and ripple factor. Draw the input and output waveforms.

Or

(b) Explain three terminal fixed voltage regulators.
