D 93916 (Pages : 2) Name..............................

Reg. No..............................

FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2020

Electronics

ELE 1C 01—ELECTRONIC DEVICES

Time : Two Hours Maximum : 60 Marks

Section A

Answer at least **eight** *questions.*
Each question carries 3 *marks.*
All questions can be attended.
Overall Ceiling 24.

1. Give the drain current equation of a JFET.
2. What are the three region of a transistor ?
3. Explain forbidden energy gap.
4. Explain about Shockley's equation.
5. What is a Capacitor ?
6. Explain about extrinsic semiconductors.
7. Explain the structure of JFET.
8. Explain pinch off voltage of JFET.
9. What is meant by the leakage current of a transistor ?
10. Mention the applications of MOSFET.
11. Explain α and β of transistor.
12. Give the structure of NPN transistor. Explain.

($8 \times 3 = 24$ marks)

Turn over

Section B (Short Essay Questions)

Answer at least **five** *questions.*
Each question carries 5 *marks.*
All questions can be attended.
Overall Ceiling 25.

13. Explain the current gain of a transistor in CB configuration.

14. Briefly explain about different types of capacitors.

15. Compare between MOSFET and FET.

16. Explain why FET is called as voltage controlled devices.

17. Explain the operation of LCD.

18. Explain about Zener diode.

19. Explain the drain and transfer characteristics of a JFET.

(5 × 5 = 25 marks)

Section C (Essay Questions)

Answer any **one** *question.*
The question carries 11 *marks.*

20. Explain briefly about three configurations of a bipolar transistor.

21. Differentiate between LED and LCD.

(1 × 11 = 11 marks)