

D 32351

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Name.....

Reg. No.....

**FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2022**

Electronics

ELE 1C 01—ELECTRONIC DEVICES

(2019—2022 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A*Answer the following questions.**Each question carries 2 marks.*

1. If a resistor is rated at 1000Ω and 10 W , what is the maximum current it can carry ?
2. What is capacitor and dielectric ?
3. Explain what is a hole ?
4. What do you mean by barrier potential ?
5. What are intrinsic semiconductors ?
6. What are photodiodes ? What are their uses ?
7. Why an ordinary junction transistor is called a bipolar device ?
8. Define β (beta) of a transistor ?
9. What is considered as the input terminal and what is the output terminal of common base configuration ?
10. Why FET is known as a voltage controlled device?
11. What are the terminals of an FET ?
12. What do you mean by negative resistance region in a UJT ?

(Ceiling : 20 marks)

Turn over

Section B

*Answer all questions.
Each question carries 5 marks.*

13. What are inductors ? What are the different types ?
14. Explain the difference in conductors, insulators and semiconductors using energy-bond diagrams.
15. What are the different types of breakdowns in a PN junction diode ?
16. What are the possible conditions of operations of a transistor ? Give the biasing conditions of each.
17. With neat diagrams, obtain the relations between different currents in a transistor ?
18. Distinguish between BJT and FET.
19. Define μ , g_m , and r_d as applied to an FET. Also obtain their relationship

(Ceiling : 30 marks)

Section C

*Answer any one question.
The question carries 10 marks.*

20. With diagrams explain common emitter configuration. Also sketch the input and output characteristics.
21. Explain with neat diagrams, the working of FET.

(1 × 10 = 10 marks)