

D 103767

(Pages : 2)

Name.....

Reg. No.....

**SECOND SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2024**

Information Technology

BIT 2C 04—ELECTRONICS AND COMMUNICATION TECHNOLOGY

(2019—2023 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answer Type Questions)*Each correct answer carries a maximum of 2 marks.**Ceiling 20 marks.*

1. Explain the terms valence electron and free electrons.
2. What do you mean by intrinsic and extrinsic semiconductor ?
3. Mention the significance of DC load line.
4. State the conditions of oscillation.
5. Draw the drain characteristics of JFET with external bias and mark saturation, cut-off and ohmic region.
6. Define the term peak reverse voltage of SCR.
7. What are the limitations of AM.
8. Briefly discuss about PSK.
9. What are the need for modulation ?
10. Silicon is preferred over germanium for making semiconductors devices ? Why ?
11. What is the role of bypass capacitor in an amplifier circuit ?
12. Mention the features of Zener diode.

Turn over

Section B

Each question carries 5 marks.

Ceiling 30 marks.

13. Mention any *five* applications where transistor act as a switch.
14. With a diagram explain Darlington pair.
15. Differentiate D MOSFET and E MOSFET.
16. Write a short note on pulse position modulation.
17. What is delta modulation and what are the features of it ?
18. What is the effect of increasing modulation index of FM ?
19. Explain sampling theorem.

Section C

*Answer any **one** question*

10 marks.

20. Elaborate the various types of transistor biasing.
21. With a neat diagram explain the action of Hartley oscillator.

(1 × 10 = 10 marks)