

C 43168

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Name.....

Reg. No.....

**SECOND SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2023**

Electronics

ELE 2C 02—ELECTRONIC CIRCUITS

(2019—2022 Admissions)

Time : Two Hours

Maximum : 60 Marks

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

1. Define ripple factor and mention the ripple factors of half-wave and full-wave rectifiers.
2. What are voltage regulators ?
3. What is Q-point of a transistor ?
4. What are the various biasing circuits for BJT amplifier ?
5. Define stability factor of an amplifier.
6. What is the need for coupling capacitors in an RC coupled amplifier ?
7. What is an emitter follower ? Draw the circuit of an emitter follower.
8. What is Barkhausen criterion ?
9. Draw the circuit of a complementary-symmetry push-pull amplifier.
10. What are the advantages of crystal oscillator ?
11. Draw the circuit of a Wein-Bridge oscillator.
12. Compare between RC and LC oscillators.

(Ceiling : 20 marks)

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

13. Draw and explain the circuit of an LC filter.
14. Explain the block diagram of a switched mode power supply.

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15. Explain the circuit and operation of a voltage divider bias.
16. Derive the expression for voltage gain and current gain of RC coupled amplifier.
17. What is feedback in amplifiers ? Explain the applications of feedback amplifiers.
18. Draw the block diagram of various types of negative feedback amplifiers.
19. Draw and explain the circuit of RC oscillator.

(Ceiling : 30 marks)

Section C

*Answer any **one** question.*

It carries 10 marks.

20. Draw and explain the working of a bridge rectifier. Derive the expression for ripple factor.
21. Draw the circuit and explain the operation of Class-B Push-Pull amplifier.

(1 × 10 = 10 marks)