D 103748 (Pages : 2) Name.....

Reg. No.....

SECOND SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2024

Electronics

ELE 2C 02—ELECTRONIC CIRCUITS

(2019—2023 Admissions)

Time : Two Hours Maximum : 60 Marks

Section A

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

1. What is PIV ? What are the values of PIV for half wave and full wave rectifier ?
2. What is the need for a filter in regulated power supply ?
3. What is the expression for ripple factor of an RC filter ?
4. Why voltage divider biasing circuit is considers as the most popular one ?
5. What do you mean by thermal stability in an amplifier ?
6. Draw the a.c. equivalent circuit of an RC coupled amplifier.
7. How bandwidth is improved using negative feedback ?
8. What are the applications of negative feedback in amplifiers ?
9. What are the various distortions associated with an amplifier ?
10. What is the condition for oscillation of phase-shift oscillator ?
11. What is the principle involved in oscillation of an LC oscillator ?
12. What are the advantages of crystal oscillator ?

(Ceiling : 20 marks)

Turn over

Section B

Answer **all** *questions.*

Each question carries 5 *marks.*

13. Explain the circuit and operation of a capacitor input filter. Mention the design guidelines also.

14. Draw the circuit of a Zener diode based series voltage regulator.

15. Draw the circuit and explain the operation of collector to base feedback bias circuit.

16. Explain with suitable circuit how operating point is stabilised in a voltage divider bias.

17. Discuss the advantages of negative feedback amplifier.

18. Compare between Class A, Class B and Class C power amplifiers.

19. Draw the circuit of Hartley oscillator. Mention the frequency of oscillation of the circuit.

(Ceiling : 30 marks)

Section C

Answer any **one** *question.*

Each question carries 10 *marks.*

20. Explain the working of RC coupled BJT amplifier. Explain the frequency response of an RC coupled BJT amplifier.

21. Explain the circuit and operation of a complementary symmetry Push-Pull amplifier.

(1 × 10 = 10 marks)