Code No: 5073/R19

FACULTY OF SCIENCE

B.Sc. **(CBCS)** II-Year (III-Semester) Regular Examinations, Dec-2022/Jan-2023

Electronics-III

(Analog Circuits)

Time: 3 Hours Max Marks: 80

SECTION-A (4x5=20 Marks)

Answer any Four questions from the following

1. Explain the terms i) Ripple factor ii) Efficiency.
2. Describe the monolithic IC regulator.
3. Discuss the effect of cascading on frequency response.
4. Compare briefly Amplifier and Oscillator.
5. Why do we use transformers in rectifier?
6. Explain the salient features of Darlington pair circuit.

SECTION-B (4x15=60 Marks)

Answer all the following questions

7. (a) Draw the circuit diagram of full-wave rectifier and explain its working. Derive an expression for efficiency and ripple factor.

(OR)

(b) What is ripple factor? Discuss the performance of inductance and capacitance filter with a neat diagram. Derive an expression for the ripple factor.

8. (a) Explain the working of SMPS with a neat Block diagram. What are the applications of SMPS.

(OR)

(b) What are three terminal IC regulators? Give the basic circuit of IC 7805 regulator.

9. (a) Draw the circuit diagram of RC coupled CE transistor amplifier and explain its gain-frequency response in low, mid and high frequencies.

(OR)

(b) Draw the block diagram of a feedback amplifier and explain its different blocks. Mention the advantages of negative feedback.

10. (a) Describe RC Phase-shift Oscillator with suitable diagram. Write its advantages.

(OR)

(b) What is a monostable multivibrator? Explain its working with the help of wave forms and neat circuit diagram.