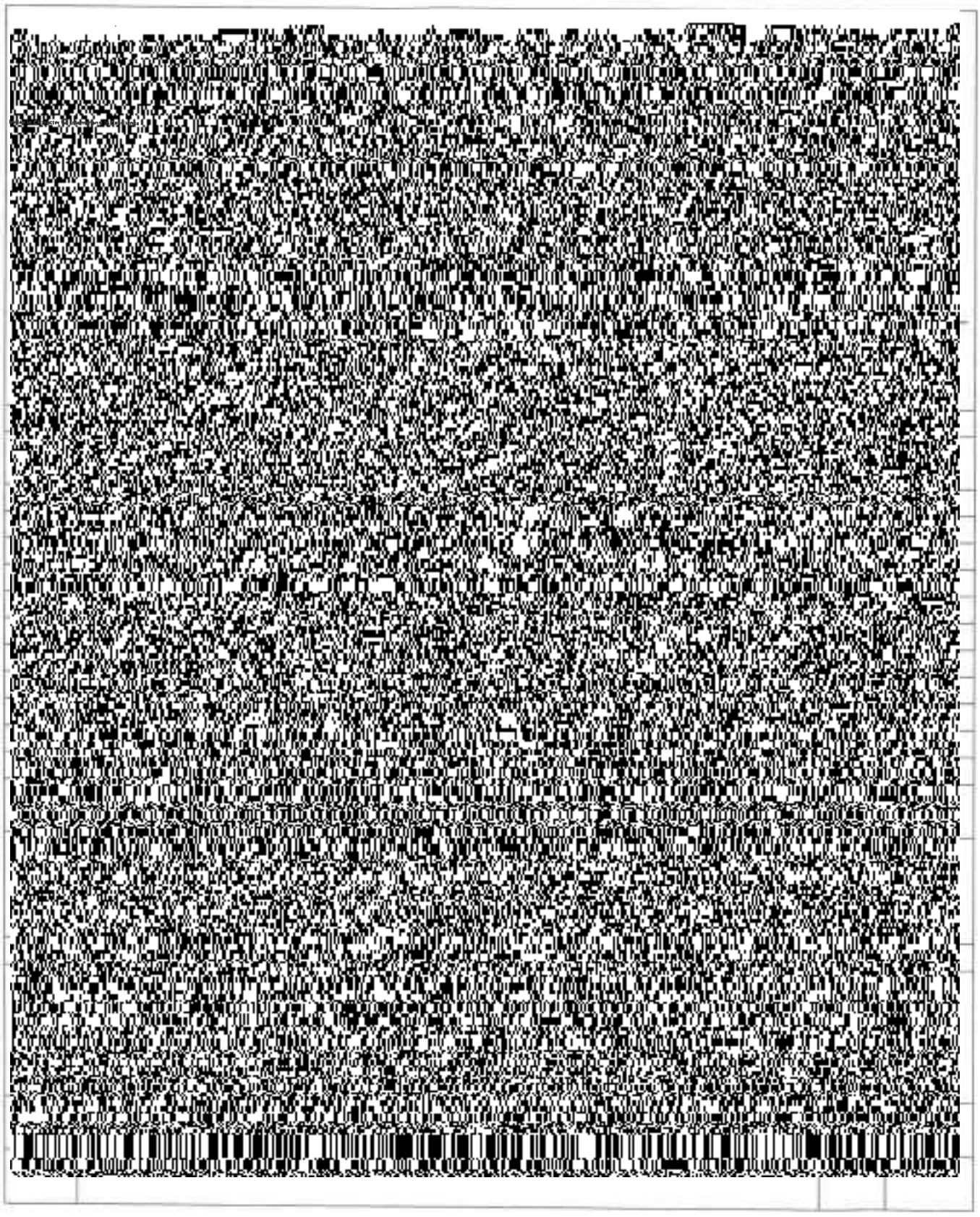

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|---|---|---|---|
| 5 | A.A full wave rectifier is operated from 50 Hz supply with 120 V (rms). It is connected to a load drawing 50mA current and using 100μF filter capacitor. Calculate the DC output voltage and rms value of ripple voltage. Also calculate the ripple factor. [5M]<br>B. Draw the circuit diagram of half wave type rectifier and explain its operation. [5M] | CO2 | L4 |
| 6 | A. Develop the input and output characteristics of a transistor in CE configuration. [7M]<br>B. Formulate the relationship among α, β, γ. [3M] | CO3 | L4 |
| | OR | | |
| 7 | Analyze the working mechanism of CB configuration of BJT. [10M] | CO3 | L4 |
| 8 | A.A Silicon transistor uses voltage divider bias method with $\beta = 100$, $V_{CC} = 12$ V, $R_C = 4K\ \Omega$, $R_1 = 10K\Omega$ and $R_2 = 100K\ \Omega$ and $R_E = 3K\Omega$, $V_{BE} = 0.6$ V. Determine the operating point and stability factor. [7M]<br>B. What do you understand by DC and AC load lines? [3M] | CO4 | L4 |
| | OR | | |
| 9 | Explain the basic requirements of transistor biasing. Verify these requirements in collector to base bias circuit. [10M] | CO4 | L4 |
| 10 | A. Compare BJT & FET. [5M]<br>B. Explain the operation of JFET. [5M] | CO5 | L3 |
| | OR | | |
| 11 | Explain the construction and principle of operation of Depletion type N-Channel MOSFET. [10M] | CO5 | L2 |