

EC-8353 Electron Devices and Circuits

Important 2Mark Questions

Unit I

1. State two disadvantages of half wave rectifier.
2. List few applications of laser diode.
3. Determine the peak output voltage of a half wave rectifier, if the diode has $V_F = 0.7V$ and the ac input is 22V.

Unit II

1. What is meant by latching in SCR?
2. State any two differences between JFET and BJT.
3. When V_{GS} of a JFET changes from -3.1 V to -3 V, the drain current changed from 1 mA to 1.3 mA. Find the value of transconductance.

Unit III

1. State the need for coupling capacitor in a transistor amplifier.
2. State the phase relationships between input/output currents and phase relationships between input/output voltages of various transistor configurations.
3. For a certain D-MOSFET, $I_{DSS} = 10mA$ and $V_{GS(off)} = -8V$. Check if it is an n channel or p channel device? Justify your answer.

Unit IV

1. Define differential mode signals of a differential amplifier.
2. A signal turned amplifier provides a bandwidth of 10kHz at a frequency of 1MHz. Find the circuit Q.
3. A multistage amplifier employs five stages each of which has a power gain of 30. What is the total gain of the amplifier in db?

Unit V

1. What is the condition required for satisfactory operation of a negative feedback amplifier?
2. An oscillator operating at 1 MHz has a stability of 1 in 10^4 . What will be the minimum value of frequency generated?
3. In a phase shift oscillator, $R_1 = R_2 = R_3 = 1 M\Omega$ and $C_1 = C_2 = C_3 = 68 pF$. At what frequency does the circuit oscillate?