Sardar Vallabhbhai Patel Institute of Technology -SVIT-Vasad

Academic Year:2021-22

First Year - Semester –I (Computer)

Subject Name: BASIC ELECTRONICS (3110016)

QUESTION BANK - TEST 4

Field Effect Transistors (FET) and its biasing

Q:1 Draw and explain the Fixed bias circuit of FET.

Q:2 Draw and explain the self bias circuit of FET.

Q:3 Explain Transconductance and switching in FET.

Q:4 Explain FET as an Amplifier.

Q:5 Draw and explain various biasing method in ohmic region.

Q:6 Draw and explain voltage divider bias of FET.

Q:7 Write short note on Depletion MOSFET.

Q:8 What are the advantage of N-Channel MOSFET over P-Channel MOSFET.

Q:9 Write a short note: E-Type MOSFET.

Q:10 Comparison of BJT, JFET and MOSFET.

AC Analysis of BJT circuits and small signal

Q:1 What is use of coupling and bypass capacitor?

Q:2 Explain the working of Transistor as Switch.

Digital

Q:1 Among TTL and CMOS digital logic family which one is better and why?

Q:2 Design and explain NAND gate using DTL logic.

Q:3 Design and explain NOR gate using DTL logic.

Q:4 Design and explain basic NAND gate using CMOS logic.

Q:5 Design and explain basic NOR gate using CMOS logic.

Q:6 Write short note on Classification of logic families.

Q:7 Compare TTL, CMOS and ECL