TEC-101 1160 Printed Pages : 3

Paper Code & Roll No. to be filled in your Answer Book

Roll No. | | | | | | | | | | |

B. Tech. I Year (I Sem.)

Odd Semester Examination-2015

Fundamentals of Electronic Engineering

Time : 3 Hours] *[Maximum Marks :100*

Answer any four (4*5=20)

Q1. What is depletion region? How it is formed in pn junction diode?

Q2. What do you understand by reverse saturation current of a diode?

Q3. Differentiate between practical & ideal diode.

Q4. Explain diode resistance and capacitance.

Q5. Explain the effect of temperature on following-

Reverse Saturation Current

V-I Characteristics

Answer any four (4*5=20)

Q1. Write short note on Clipping Circuit.

Q2. Write short note on Clamping Circuit.

Q3. Explain how zener diode as shunt regulator.

Q4. Draw the diagram of centre tap rectifiers & explain its working.

Q5. Explain ripple factor in rectifier.

Answer any two (2*10=20)

Q1. Draw I/P& O/P characteristics for CB & CE configuration.

Q2. Briefly explain-

Fixed Bias

Emitter Bias

Voltage Divider Bias

Q3. Explain h-parameter model graph for CE configuration.

Answer any two (2*10=20)

Q1. Sketch the drain and transfer characteristics of JFET and also explain.

Q2. Explain construction of a MOSFET in enhancement mode and also draw its characteristics.

Q3. Explain construction of a MOSFET in depletion mode and also draw its characteristics.

Answer any two (2*10=20)

Q1. Define open loop op-amp configuration as inverting, non-inverting and differential amplifier.

Q2. Calculate the output voltage of summer for the following set of input voltage & resistor-

V_1=1V, V_2=2V, V_3=3V, R_1=500KΩ, R_2=1MΩ, R_3=1MΩ &R_f=1MΩ.

Q3. Draw & explain the symbols of AND, OR, NOT, NAND & NOR gates.

—x—