ROLL NUMBER

SRINIX COLLEGE OF ENGINEERING

3rd INTERNAL EXAMINATION-2021-22

Subject-**BETC**   Semester-**1st**   Branch-**SEC-B**

Full Mark-**100**   Time-**3.00Hrs**

ANSWER ALL THE QUESTIONS(PART-A)   [2X10=20]

1. Define diode. Draw the symbol of PN-junction diode and zener diode.
2. What do you mean by semiconductor? Examples.
3. Find out the relation between β and γ.
4. Define biasing. How forward biasing can be achieved in BJT, show with diagram?
5. Differentiate between BJT and FET.
6. Draw the input and output characteristics of JFET?
7. Define OPAMP with its symbol.
8. Find 1's compliment of$(11001100)_2$ $and (17)_{10}$.
9. Convert$(0010110)_2 = (?)_{10}$.
10. What are universal gates and why they are called so?

ANSWER ALL THE QUESTIONS (PART-B)   [6X8=48]

1. Describe PN-junction diode with its properties.
2. With the VI-characteristics of diode explain its biasing.
3. Explain fixed biasing method of BJT with its diagram.
4. With neat diagram and symbol explain the working of PNP transistor.
5. What are the parameters of JFET? Explain.
6. Explain OPAMP as an integrator circuit.
7. Given $Y = (\bar{A} + B)(B + C)$. Find its standard POS form and write the max terms.

8. Given $Y = \sum m(0,4,6,7,8,12,14,15)$.Solve using K-map.

ANSWER ALL THE QUESTIONS (PART-C)   [16X2=32]

1. Explain the center tap full wave rectifier. Find the efficiency of full wave rectifier.

2. What is a logic gate? Explain all the logic gates with its relevant information.