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## SRINIX COLLEGE OF ENGINEERING

3<sup>rd</sup> INTERNAL EXAMINATION-2021-22

Subject-**BEE**

Semester-**1<sup>st</sup>**

Branch-**SEC-A**

Full Mark-**100**

Time-**3.00Hrs**

**ANSWER ALL QUESTIONS(PART-A)**

**[2X10=20]**

1. What is Voltage and its unit?
2. Define KVL and KCL.
3. Define Crest factor.
4. What are different between active power and reactive power.
5. Define Line current and phagecurrent.
6. State Norton's theorem?
7. Convert rectangular to polar5-j6
8. Explain Self inductance
9. Define Magnetic flux and its unit.
10. Write down the EMF equation of DC motor.

**ANSWER ANY EIGHT QUESTIONS (PART-B)**

**[6X8=48]**

1. State and explain Thevenin's theorem.
2. State difference between magnetic circuit and Electric circuit.
3. Explain the construction and principle of Single-phase transformer.
4. In a series circuit contain resistance 5ohm and inductance0.5H variable capacitance in series its supply voltage 220v,50hz under resonance condition calculate capacitance, inductance, voltage drop each and quality factor.
5. What is hysteresis loop; explain with the help of diagram.
6. State and explain superposition theorem.
7. Explain difference between Star and Delta connection
8. Explain RLC Series circuit and its derivation.
9. what is star and delta connection and convert star to delta connection.

**ANSWER ANY TWO QUESTIONS (PART-C)**

**[16X2=32]**

1. (a) An inductive ckt takes 5A,220V supply at powerfactor0.8 lagging, calculate impedance,resistance,reactance and phase angle.  
(b) Find the current in a seriesckt having  $R=2\text{ohm}$ ,  $L=20\text{H}$  While dc50v supply what is the value of current after 10sec. switch is ON.
2. Define the Nortons and explain in the steps with proper diagram.
3. State and explain DC motor and different types of DC motor.