SATYUG DARSHAN INSTITUTE OF ENGINEERING & TECHNOLOGY

B.Tech. II Semester (CSE)

Assignment-2

Basic Electrical Technology (ESC-101A)

Last Date of Submission:08/04/2024 *Maximum Marks: 20*

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1. Two "wattmeters" are connected to measure the total power in a three-phase balanced circuit indicating 2000 W and 500 W respectively. Find the power factor of the circuit, (i) When both the readings are positive. (ii) When the latter is obtained after reversing the connections to the current coil of one instrument. **(7.5) July 2023**
2. A balanced three phase load consists of three coils each having resistance of 4 ohm and inductance 0.02 H. It is connected to a 415 v. 50 Hz, 3-phase ac supply. Determine the phase voltage, phase current, power factor and active power when the loads are connected in (i) Star (ii) Delta. **(7.5) July 2023**
3. A three phase load consisting of a resistance 25 Ω , inductance of 0.15 H and capacitance of 100 μF is connected to 400 V 50 Hz. Calculate line current, power factor, total active power (i) when connected in star (i) when connected in delta. **(8) April 2022**
4. A balanced 3 phase delta connected load has per phase impedance of (25+j40) Ω. If 400 V, 3 phase supply is connected to this load, find (i) phase current (ii) line current (ii) power supplied to the load.