BHARATI VIDYAPEETH COLLEGE OF ENGINEERING

MID TERM TEST II

SET: B

SUBJECT: BEE SEM: I

MARKS: 20 TIME: 1 HOUR

Q.1) Solve any five. (2 Marks each)

a) Define i) Rectifier ii) Line Voltage

b) Write Relationship between line voltage and phase voltage , Line current and phase current in Delta connected balanced load.

c) Draw phasor diagram for 3-phase star connected balanced inductive load.

d) Compare ideal and practical transformer

e) Draw Phasor diagram of Single phase transformer on capacitive load.

f) Draw complete equivalent circuit of single phase transformer.

Q.2) Solve any one(5 marks)

a) Each phase of 3 phase delta connected load has an impedance of $(50\angle 60)\ \Omega$. The line voltage is 400V. Calculate the total power. What will be the reading two wattmeter connected to measure power?

b)Draw and explain input and output characteristics of CE – Configuration of BJT.

Q.3) Solve any one (5 marks)

a) A 5 KVA,200/400V ,50 Hz single phase transformer gave the following results

OC test (lv side) :	200V	1A	100W
SC test (hv side) :	15V	10A	85W

Calculate equivalent circuit of transformer with circuit constants referred to primary.

b) A 25 KVA 4000/200V ,50Hz transformer has primary resistance= 3.45 Ω, secondary resistance= 0.009Ω, primary leakage reactance = 5.2 Ω, secondary leakage reactance= 0.051 Ω. Calculate i) equivalent impedance as referred to both primary and secondary, ii) Copper loss at full load.