ROLL NO:	

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 20 % Max Marks: 40 Max Time: 1 hr. Monday, 24 September, 2018

TEST – 1

Odd Semester 2018-19 Course: **EEE 210 Electrical Machines-II** V Sem. EEE

Instruction:

(i) Read the question properly and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and Non-programmable calculators are permitted.

Part A

(2 Q x 5 M = 10 Marks)

1. How the losses are minimized in a transformer.
2. Explain with phasor diagram, the 2 components of a no load input current of single phase transformer

Part B

(1 Q x 6 M = 6 Marks)

3. What are the parameters that can be obtained from Open Circuit test on single phase transformer?

Part C

(2 Q x 12 M = 24 Marks)

4. A 250 kVA single phase transformer has 98% efficiency at full load at 0.9 pf lag. The efficiency at 60% load and at 0.9 pf lag is 97%.calculate the losses.
5. A 4 kVA 200/400 V single phase transformer takes 0.7A and 65W on open circuit .When the low voltage winding is short circuited and 15 V is applied to the high voltage terminals the current and power are 10A and 75W respectively .calculate the full load regulation at 0.8 pf lagging.

ROLL NO:

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

TEST 2

Odd Semester: 2018-19 | **Date**: 27 November 2018

Course Code: EEE 210 | **Time**: 1 Hour

Course Name: Electrical Machines-II | **Max Marks**: 40

Branch & Sem: EEE & V Sem | **Weightage**: 20%

Instructions:

(i) Read the question properly and answer accordingly.

(ii) Question paper consists of 3 parts.

(iii) Scientific and Non-programmable calculators are permitted.

Part A

Answer **all** the Questions. **Each** question carries **eight** marks. (1x8=8)

1. What are the Conditions for the satisfactory operation of transformers in parallel?

Part B

Answer **all** the Questions. **Each** question carries **ten** marks. (2x10=20)

2. Draw the different types of 3 phase transformer connections and write the necessary equations

3. Explain the theory behind Scott connection of transformer.

Part C

Answer **all** the Questions. **Each** question carries **twelve** marks. (1x12=12)

4. Find the all-day efficiency of 500kVA distribution transformer whose copper loss and iron loss at full load are 4.5kW and 3.5kW respectively. During a day of 24 hours it is loaded as under

No. of hours	Loading in kW	Power Factor
6	400	0.8
10	300	0.75
4	100	0.8
4	0	-

Roll No.												

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

END TERM FINAL EXAMINATION

Odd Semester: 2018-19 | **Date**: 27 December 2018

Course Code: EEE 210 | **Time**: 2 Hours

Course Name: Electrical Machines II | **Max Marks**: 80

Programme & Sem: EEE & V Sem | **Weightage**: 40%

Instructions:

(i) *Read the question properly and answer accordingly.*
(ii) *Question paper consists of 3 parts*
(iii) Scientific and Non-programmable calculators are permitted

Part A

Answer **all** the Questions. **Each** question carries **ten** marks. (3Qx10M=30)

1. Explain the Principle of Operation of 3-phase induction motor.
2. A 4 pole, 50 Hz Induction Motor has a slip of 1% at no load .When operated at full load the slip is 2.5%. Find the change in speed from no load to full load.
3. Discuss the effect of adding resistance to the rotor in order to change the Starting Torque of 3-Phase Induction Motors.

Part B

Answer **all** the Questions. **Each** question carries **twelve** marks. (3Qx12M=36)

4. Discuss the Induction Motor operation as a Transformer
5. What is the necessity of starters for 3-Phase Induction Motors? Name the different Methods of Starting.
6. The Rotor R and standstill reactance of a 3 phase Induction Motors are respectively 0.015Ω and 0.09 Ω per phase .What is the pf of the motor? What is the pf at a slip of 4 %.

Part C

Answer the Question. Question carries **fourteen** marks. (1Qx14M=14)

7. Explain in detail the steps involved to draw the circle diagram of a 3 phase Induction Motor