KERALA AGRICULTURAL UNIVERSITY

B.Tech.(Ag. Engg.) 2017 Admission

III Semester Final Examination-January 2019

Fpme.2105 Electrical Machines and Power Utilization (2+1)

Marks: 50

Time: 2 hours

I Fill in the Blanks **(10x1=10)**

1 The speed of a _____ motor is practically constant

2 The commutator of a D.C generator acts as _____

3 The open circuit test on a transformer gives_____

4 Three phase wound rotor motor is also called _____ motor.

5 The phase sequence of a three phase system is RYB. The other possible phase sequence can be_____

State True or False

6 In a parallel resonance circuit impedance is maximum at resonance frequency.

7 The magneto motive force is measured in Weber's.

8 Copper losses in a generator vary with load.

9 A three phase induction motor can also be run on single phase supply.

10 Efficiency of a transformer is maximum when copper losses are equal to iron losses.

II Write Short notes on any FIVE of the following **(5x2=10)**

1 Working principle of transformer

2 Why starter is necessary for starting induction motor?

3 Slip

4 Armature reaction in DC machine

5 Why three phase induction motor is self starting?

6 Transformer losses

7 Disadvantages of low power factor.

III Answer any FIVE of the following. **(5x4=20)**

1 Difference between electrical circuit and magnetic circuit.

2 Commutation of D.C generator.

3 Speed control method of D.C. series motor.

4 Torque Slip Characteristics of Three Phase Induction Motor.

5 Transformer open circuit test.

6 Methods of improving commutation. **(any two)**

7 Comparison of lap and wave windings.

IV Write an essay on any ONE of the following **(1x10=10)**

1 Shaded pole motor

2 Construction of D.C. generator

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