

Program: BE ELECTRICAL Engineering

Curriculum Scheme: Revised 2019 C

Examination: Second year Semester IV

Course Code: EEC402

Course Name: electrical AC machine 1

Time: 2 hour 30min

Max. Marks: 80

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	Which losses are recorded during open circuit in single phase transformer
Option A:	Core losses
Option B:	Copper losses
Option C:	Both a and b
Option D:	Friction and windage loss
Q2.	During short-circuit test, iron losses are negligible because
Option A:	the current on secondary side is negligible
Option B:	the voltage on secondary side does not vary
Option C:	the voltage applied on primary side is low
Option D:	full-load current is not supplied to the transformer.
Q3.	Which method is used for transferring power through auto transformer
Option A:	Induction
Option B:	conduction
Option C:	Mutual coupling
Option D:	Conduction & induction
Q4.	The delta connection has advantage of restricting the third harmonic current to
Option A:	Within star connection
Option B:	Within delta connection
Option C:	Within star and delta connection
Option D:	neither star or delta connection
Q5.	Which type of connection is used in 3 ph transformer for the substation end of transmission line.
Option A:	Sta-star
Option B:	Star- delta
Option C:	Delta-delta
Option D:	Delta-star
Q6.	In order to semi closed or totally closed slot are used in induction motor
Option A:	Improve power factor
Option B:	Improve efficiency
Option C:	Improve starting torque
Option D:	Improve pull out torque
Q7.	Induction generator deliver power at power factor
Option A:	leading
Option B:	lagging

Option C:	unity
Option D:	zero
Q8.	In a variable speed induction motor drive v/f is kept constant over its wide range of frequency the motor operate in following mode.
Option A:	Constant power mode
Option B:	Constant slip mode
Option C:	Constant torque mode
Option D:	variable power mode
Q9.	In a circle diagram of 3ph induction motor the rotor diameter is determine by
Option A:	Total stator current
Option B:	Rotor current
Option C:	Exciting current
Option D:	Rotor current ref to stator
Q10	In a split-phase motor, the running winding should have
Option A:	High resistance and low inductance
Option B:	High resistance and High inductance
Option C:	Low resistance and high inductance
Option D:	Low resistance and low inductance

Q2.	SOLVE ANY TWO	20 MARKS
1	Explain open circuit and short circuit test on 1 PH transformer how to determine different parameters from these test..	
2	Derive expression for copper saving in step down auto transformer.	
3	Explain with the the help of phasor diagram and connection diagram how Scott connection are used to obtain two phase supply from three phase supply mains.	
Q3.	SOLVE ANY TWO	20 MARKS
1	Explain construction and working of 3 ph induction motor with neat diagram.	
2	What is the need of starter in 3 ph induction motor explain star delta stater with neat diagram or auto transformer starter with neat diagram.	
3	Explain in detail shaded pole starting of 1 PH induction motor and its torque speed characteristic.	
Q4.	SOLVE ANY TWO	20 MARKS
1	Explain switching in transient phenomenon in 3 ph transformer.	
2	What are the parameter found from no load and blocked rotor test of three phase induction motor.	
3	What is the need of speed control 3 ph induction motor.list the method used.explain pole changing method in detail	