Program: TE Electrical Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: EEC602 and Course Name: Electrical Machine-III

Time: 1 hour Max. Marks: 50

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

Q1.	Which one of the following methods would give higher than actual value of regulation of an alternator
Option A:	ZPF method
Option B:	MMF method
Option C:	EMF method
Option D:	ASA Method
Q2.	Due to short pitching, the induced emf gets
Option A:	Reduced
Option B:	increased
Option C:	remains same
Option D:	None of these

Q3.	In a 4 pole, 3 phase alternator, armature has 40 slots. It is using an armature winding which is short pitched by one slot. Its coil span factor is
Option A:	0.9
Option B:	0.9423
Option C:	0.9476
Option D:	0.9876
Q4.	In Potier's triangle method, to determine armature leakage reactance and armature reaction mmf separately, the tests performed are
Option A:	Open circuit test and short circuit test
Option B:	Open circuit test and zero power factor test
Option C:	Short circuit test and zero power factor test
Option D:	Open circuit test, short circuit test and zero power factor test
Q5.	A three phase alternator has a phase sequence of RYB for its three output voltages. In case the field current is reversed, the phase sequence will become
Option A:	RBY
Option B:	RYB

Option C:	YRB
Option D:	None of the above.
Q6.	Under no load condition ,power drawn by the prime mover goes to
Option A:	produce induced emf in armature winding
Option B:	meet no load losses
Option C:	produce power in the armature
Option D:	meet cu losses both in armature and rotor
Q7.	For parallel operation ,a.c. polyphase alternators must have the same
Option A:	speed
Option B:	voltage rating
Option C:	KVA rating
Option D:	excitation
Q8.	The power factor of a alternator under short circuit condition ia almost near to
Option A:	zero leading

Option B:	zero lagging
Option C:	unity pf
Option D:	o.8lagging
Q9.	Alternator leakage reactance can be determined by
Option A:	O.C. characteristics and zpf characteristics
Option B:	O.C. characteristics and S.C. characteristics
Option C:	slip test and o.c. test
Option D:	slip test and s.c. test
Q10.	During slip test armature current gives a maximum value when armature MMF is along
Option A:	direct axis
Option B:	quadrature axis
Option C:	midway between d-axis and q-axis
Option D:	field MMF

Q11.	The current output of the alternator is taken through
Option A:	commutator segment
Option B:	slip ring
Option C:	carbon brushes
Option D:	solid connection
Q12.	In a cylindrical synchronous machine ,the phasor summation of stator MMF and rotor MMF is possible because
Option A:	two MMF are rotating in opposite directions
Option B:	two MMF are rotating in same direction
Option C:	one MMF is stationary and the other is rotating
Option D:	Two MMF are stationary with respect to each other
Q13.	The armature mmf component along the quadrature axis results in ----------
Option A:	Cross Magnetizing
Option B:	Magnetizing
Option C:	Magnetizing/Demagnetzing

Option D:	Demagnetizing
Q14.	Choose the correct relationship.
Option A:	Fd=Fa*cosΨ
Option B:	Fd=Fa*sinΨ
Option C:	Fd=Fa
Option D:	Fd=Fa*tanΨ
Q15.	The reluctance power in salient pole synchronous generator is developed due to variation of
Option A:	Resistance
Option B:	reluctance in air gap
Option C:	Torque angle
Option D:	Terminal voltage
Q16.	The oscillations in a synchronous motor can be damped out by
Option A:	Maintaining constant excitation

Option B:	Running the motor on leading power factors
Option C:	Providing damper bars in the rotor poles faces
Option D:	Oscillations cannot be damped
Q17.	The operating speed of a synchronous motor can be changed to new fixed value by
Option A:	Changing the load
Option B:	Changing the supply voltage
Option C:	Changing frequency
Option D:	Using brakes
Q18.	The number of poles on a pony motor employed for starting of a 3-phase synchronous motor should be _____ than that on synchronous motor
Option A:	lesser than
Option B:	more than
Option C:	equal to

Option D:	depend on armature current.
Q19.	A thee phase synchronous motor hunts due to
Option A:	Fluctuating load
Option B:	Fluctuating supply voltage
Option C:	Excessive field current
Option D:	Faulty connections
Q20.	When synchronous motor is started ,field winding is energized
Option A:	In the very beginning
Option B:	When motor attains a speed slightly less than the synchronous speed.
Option C:	after motor has attained the synchronous speed and synchronized
Option D:	any time
Q21.	If air-gap length is doubled in a Synchronous machine, the value of SCR is
Option A:	halved

Option B:	remains same
Option C:	tripled
Option D:	doubled
Q22.	Field Self Inductance in a Synchronous machine is
Option A:	zero
Option B:	constant
Option C:	varies with respect to time
Option D:	varies with respect to space
Q23.	How is SCR related to the physical size and cost of the synchronous machine?
Option A:	inversely proportional
Option B:	irrelevant
Option C:	directly proportional
Option D:	directly proportional to double the value

Q24.	Direct axis reactance is defined as the ratio of
Option A:	Vmax to Imax
Option B:	Vmin to Imax
Option C:	Vmin to Imin
Option D:	Vmax to Imin
Q25.	Quadrature axis synchronous reactance is the ratio of
Option A:	Vmax to Imax.
Option B:	Vmin to Imax
Option C:	Vmin to Imin
Option D:	Vmax to Imin

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	A
Q3.	D
Q4	B
Q5	B
Q6	B
Q7	B
Q8.	B
Q9.	A
Q10.	B
Q11.	D
Q12.	D
Q13.	A
Q14.	B
Q15.	B
Q16.	C
Q17.	C

Q18.	A
Q19.	A
Q20.	B
Q21.	D
Q22.	B
Q23.	C
Q24.	D
Q25.	B