Program: BE Electrical Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: EEC501 and Course Name: Power System-II

Time: 1 hour Max. Marks: 50

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

Q1.	The maximum short circuit current occurs in the case of
Option A:	Three phase fault
Option B:	Double line to ground fault
Option C:	Line to line fault
Option D:	Single line to ground fault
Q2.	Zero sequence current is absent during
Option A:	single line to ground fault
Option B:	line to line fault
Option C:	line to line ground fault
Option D:	double line to ground fault
Q3.	To protect transmission lines against lightning strokes, following equipment is used
Option A:	Oil circuit breaker
Option B:	spacers
Option C:	isolators
Option D:	Ground wires
Q4.	If a travelling-wave travelling along a loss-free overhead line does not result in any reflection after it has reached the far end, then the far end of the line
Option A:	Terminated with capacitor
Option B:	open circuited
Option C:	short circuited
Option D:	terminated with resistance equal to surge impedance of line
Q5.	Positive and negative sequence impedances will not be same for
Option A:	transformer
Option B:	alternator
Option C:	feeder
Option D:	transmission line
Q6.	Basically a lightning arrester is a

Option A:	Surge diverter
Option B:	Surge capacitor
Option C:	Surge reflector
Option D:	Surge absorber
Q7.	For a given base voltage and base volt ampere, per unit impedance value of an element is 'X'. What will be the per unit impedance value of this element when the voltage and volt ampere base are both doubled?
Option A:	0.5X
Option B:	2X
Option C:	4X
Option D:	X
Q8.	Which fault is most severe fault in power system
Option A:	Line to line fault
Option B:	Line to ground fault
Option C:	Line to ground fault at alternator terminals
Option D:	3-phase fault
Q9.	The arcing ground phenomenon takes place in 3 phase isolated neutral system during ---------- fault
Option A:	line to line fault
Option B:	line to ground fault
Option C:	double line to ground fault
Option D:	3 phase fault
Q10.	If star connected winding of alternator is impedance grounded than
Option A:	negative sequence component current will include grounding impedance in its network
Option B:	positive sequence component current will include grounding impedance in its network
Option C:	Zero sequence component current will include grounding impedance in its network
Option D:	All the sequence component current will include grounding impedance in its network
Q11.	Occurrences of overvoltage is more in Overhead Transmission Lines due to
Option A:	internal faults
Option B:	switching surges
Option C:	external atmospheric conditions such as lightning
Option D:	corona
Q12.	The charging current in transmission line increases due to corona effect because corona increases
Option A:	Line current

Option B:	Power loss in line
Option C:	Effective line voltage
Option D:	Effective conductor diameter
Q13.	what is BIL
Option A:	Basic switching impulse insulation level
Option B:	Basic lighting improve insulation level
Option C:	Basic lighting impure insulation level
Option D:	Basic insulation level
Q14.	If line to line fault occurs on phase ‘b’ and phase ‘c’ in power system, then sum of current in phase ‘b’ and phase ‘c’ is
Option A:	Twice of current in phase ‘b’
Option B:	Half of current in phase ‘b’
Option C:	Always zero
Option D:	Equal to current in phase ‘a’
Q15.	A synchronous machine with low value of short-circuit ratio has
Option A:	good speed regulation
Option B:	good voltage regulation
Option C:	higher stability limit
Option D:	lower stability limit
Q16.	The BIL of a power system is usually chosen as
Option A:	25% to 30% more than the protective level offered by the protective devices (surge arresters etc.)
Option B:	50% more than the protective level offered by the protective devices (surge arresters etc.)
Option C:	5% to 10% more than the protective level offered by the protective devices (surge arresters etc.)
Option D:	Highest lightning Surge voltage expected
Q17.	As the conductor radius increases the disruptive critical voltage
Option A:	Decreases
Option B:	Increases
Option C:	Remains same
Option D:	Becomes negligible
Q18.	What happens to the value of the fault current in case of SLG fault, if fault impedance is introduced?
Option A:	The fault current increase
Option B:	The fault current remains same as in case of SLG fault.
Option C:	The fault current becomes zero
Option D:	The fault current is reduced
Q19.	In a 3-phase, 5 kV, 5 MVA system, what is the base impedance?

Option A:	5 ohms
Option B:	500 ohms
Option C:	0.5 ohms
Option D:	50 ohms
Q20.	The transmission line with surge impedance of 300 ohm is terminated by load impedance of 300 ohm. The reflection coefficient for system is -------
Option A:	2
Option B:	1
Option C:	0
Option D:	0.5
Q21.	A 500 kVA, 440 V synchronous generator is supplying a passive load of 400kW at 0.8 Lagging Power factor. it has subtransient reactance of 0.1 pu. What is the Value of post fault current for short circuit at generator terminals?
Option A:	6.97 kA
Option B:	10.63 kA
Option C:	16.20 kA
Option D:	10 kA
Q22.	When ratio of phase voltage in kV to disruptive critical voltage in kV is greater than 1.8, corona power loss is calculated by
Option A:	Peek's formula
Option B:	Peterson's formula
Option C:	Knee's formula
Option D:	Anderson's formula
Q23.	Symmetrical component used in fault analysis because
Option A:	The number of equation become smaller
Option B:	The sequence network do not have mutual coupling
Option C:	The results are required in terms of symmetrical components
Option D:	It gives most accurate value of fault current
Q24.	The per unit impedance of an alternator corresponding to base values 13.2 kV and 300 MVA is 0.2 pu. the p. u Value of the impedance for base values 13.8 kV and 50 MVA in pu will be
Option A:	1
Option B:	0.105
Option C:	0.305
Option D:	0.145
Q25.	If transmission line is terminated with impedance equal to surge impedance of line, then value of reflected voltage is -------
Option A:	Zero
Option B:	Equal to forward voltage

Option C:	Twice of forward voltage
Option D:	Half of forward voltage

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

Q17.	B
Q18.	D
Q19.	A
Q20.	C
Q21.	A
Q22.	A
Q23.	B
Q24.	C
Q25.	A