

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Course/Branch : B.E., / EEE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : EE8501	Subject Name : Power System Analysis	Rev. No.	02
Unit No : V	Unit Name : Stability Analysis	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	A three phase alternator can supply a maximum of 5000 KVA at 66 kV. The machine has internal resistance of 6%. The reactance per phase of the limiting reactor if the steady apparent power on the short circuit do not exceed 5 times full load is _____ a) 1.22 Ω b) 2.44 Ω c) 5 Ω d) 1.84 Ω	L3
2	A transmission line has $Z = (2+j8)\Omega$ has 10% of the voltage regulation with the lagging load of 0.8. If the load is 0.707 leading, the V.R. is _____ (Assume the current is same in both cases) a) -6.63% b) -5.77% c) -10% d) -8.63%	L3
3	A generating station has a connected load of 43 MW. The unit generated having 61.5×10^6 per year. The load factor will be _____ a) 0.35 b) 0.33 c) 0.5 d) 0.45	L3
4	The symmetrical components are used in fault analysis because of _____ a) sequence of network do not have mutual coupling b) number of equations is smaller c) results are required in symmetrical components d) none of the mentioned	L3
5	Two conductors of a single phase line, having the 1cm diameter and arranged in a vertical plane with one conductor mounted 1m above other. A second identical line is mounted at same height as first and spaced horizontally 0.25m apart. The two upper and lower conductors are connected in parallel. The loop inductance of the line is _____ (mH/km) a) 0.84 b) 0.42 c) 0.32 d) 0.64	L3
6	Two conductors of a single phase line, having the 1cm diameter and arranged in a vertical plane with one conductor mounted 1m above other. A second identical line is mounted at same height as first and spaced horizontally 0.25m apart. The two upper and lower conductors are connected in parallel. The inductance of the line is _____ (mH/km) a) 0.42 b) 0.84 c) 0.55 d) 0.80	L3

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Course/Branch : B.E.,/ EEE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : EE8501	Subject Name : Power System Analysis	Rev. No.	02
Unit No : V	Unit Name : Stability Analysis	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

7	A transmission line has line parameters $A = 0.8$, $B = 200 \angle 90^\circ$, $C = 0.5 \times 10^{-6}$ operating at 400kV at no load. The sending current in line will be _____ a) 0.1443 b) 1.443 c) 0.324 d) 3.245	L3
8	A 2-wire ring distributor is 300m long and fed at 240V at 'A'. At 'B', 150m away from A, a load of 120A is taken and at 'C', 100m away in opposite direction a load of 80A is taken. If the resistance per 100m of single conductor is 0.03Ω , then current in section AB feeder is _____ a) 86.67 A b) 48.76 A c) 88 A d) 98.4 A	L3
9	A 50 bus power system Y_{bus} has 80% sparsity. The total number of transmission lines will be _____ a) 225 b) 500 c) 475 d) 100	L3
10	The given graph is the depiction of _____ on a large power system network. a) Fault in feeder b) Three phase motor getting short c) L-G fault d) Any of the mentioned	L3
11	A single core cable is graded by using three dielectrics with relative permittivity 5,4,3 respectively. The diameter of the conductor is 2cm and the overall diameter is 8 cm. If the three dielectric work at the same maximum stress of 40kV/cm, then the safe working rms voltage of cable is _____ kV a) 57.72 b) 81.63 c) 84.67 d) 71.63	L3
12	A generator delivers power of 1 pu to an infinite bus through a purely reactive network. The maximum power that could be delivered by generator is 2 pu. A three phase fault occurs at the generator which reduces the generator output to zero. The fault is restored after 'tc' seconds. The maximum swing of rotor angle is found to be $\delta_{max} = 110^\circ$ electrical. The rotor angle at 'tc' is _____ electrical deg. a) 69.14° b) 159.14° c) 63.08° d) 65.7°	L3
13	A system consists of an alternator having reactance of 0.5pu connected to an infinite bus through a series of reactance of 1 pu. The generator terminal voltage of IBB is 1 pu and that	L3

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Course/Branch : B.E./ EEE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : EE8501	Subject Name : Power System Analysis	Rev. No.	02
Unit No : V	Unit Name : Stability Analysis	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

	of 1.2 pu. The steady state power system limit (in pu) is _____ a) 1.152 b) 1.167 c) 1.765 d) 1.729	
14	A system consists of an alternator having reactance of 0.5pu connected to an infinite bus through a series of reactance of 1 pu. The generator terminal voltage of IBB is 1 pu and that of 1.2 pu. The Steady state occurs at power angle of _____ degree. a) 0 b) 90 c) 180 d) 45	L3
15	A system consists of an alternator having reactance of 0.5pu connected to an infinite bus through a series of reactance of 1 pu. The generator terminal voltage of IBB is 1 pu and that of 1.2 pu. The emf induced in the alternator for the maximum power transfer will be _____ a) 1.729 b) 1.152 c) 1.2 d) 1.6	L3
16	A system consists of an alternator having reactance of 0.5pu connected to an infinite bus through a series of reactance of 1 pu. The generator terminal voltage of IBB is 1 pu and that of 1.2 pu. The emf induced in the alternator will have the phase difference with respect to reference for the maximum power transfer is _____ a) 90 b) 0 c) 73.87 d) 86.25	L3
17	A three phase transmission line is having a three unit suspension insulation string. The voltage at the insulator unit nearest to the line is 20kV and that across the adjacent unit is 15 kV. The ratio of mutual to ground capacitance is _____ a) 0.18 b) 0.2 c) 0.333 d) 0.16	L3
18	_____ is a set of electrical boundaries that allows a piece of equipment to function in its intended manner without significant loss of performance or life expectancy. (A) Power factor (B) Power system	L1

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Course/Branch : B.E., / EEE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : EE8501	Subject Name : Power System Analysis	Rev. No.	02
Unit No : V	Unit Name : Stability Analysis	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

	(C) Power quality (D) Power field	
19	<p>Ratio between the active power (watts) of the fundamental wave to the apparent power (voltamperes) of the fundamental wave is</p> <p>(A) Displacement Power Factor (B) Distortion Factor (C) Power Factor (D) Displacement Harmonic Factor</p>	L2
20	<p>The total power factor is greater than the displacement power factor,</p> <p>(A) True (B) False</p>	L2
21	<p>_____ is the RMS reduction in the AC voltage at power frequency from half of a cycle to a few seconds' duration.</p> <p>(A) Surge (B) Swell (C) Sag (D) Transient</p>	L1
22	<p>Electrical transient characterized by a sharp increase in voltage or current is called as</p> <p>(A) Sag (B) Surge (C) Swell (D) Transient</p>	L1

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Course/Branch : B.E., / EEE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : EE8501	Subject Name : Power System Analysis	Rev. No.	02
Unit No : V	Unit Name : Stability Analysis	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

23	<p>_____ is the RMS increase in AC voltage at power frequency from half of a cycle to a few seconds' duration</p> <p>(A) Swell</p> <p>(B) Sag</p> <p>(C) Transient</p> <p>(D) Surge</p>	L2
24	<p>Most electrical equipment is designed to operate within a voltage of \pm _____ of nominal with marginal decrease in performance.</p> <p>(A) 5 %</p> <p>(B) 1 %</p> <p>(C) 10 %</p> <p>(D) 0.5 %</p>	L2
25	<p>In in urban areas, the utility frequencies are rarely outside \pm _____ Hz of the nominal frequency.</p> <p>(A) 50</p> <p>(B) 1</p> <p>(C) 10</p> <p>(D) 0.1</p>	L1
26	<p>A penalty from industrial and commercial users of power is levied if the power factor is below _____.</p> <p>(A) 0.96</p> <p>(B) 0.95</p> <p>(C) 0.99</p> <p>(D) 1</p>	L1

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Course/Branch : B.E./ EEE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : EE8501	Subject Name : Power System Analysis	Rev. No.	02
Unit No : V	Unit Name : Stability Analysis	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

27	<p>Which of the following equipment has high immunity index?</p> <p>(A) electromechanical relays</p> <p>(B) solid-state relays</p> <p>(C) communication, and data processing equipment</p> <p>(D) electronic ballasts</p>	L2
28	<p>As per the power quality indices, which of the following applications face low power quality problems?</p> <p>(A) HVAC power panels</p> <p>(B) lighting power distribution panel</p> <p>(C) elevators</p> <p>(D) large motors</p>	L2
29	<p>As per the power quality indices, which of the following applications face high power quality problems?</p> <p>(A) Service entrance switchboard</p> <p>(B) HVAC power panels</p> <p>(C) large motors</p> <p>(D) lighting power distribution panel</p>	L1
30	<p>_____ are fast, short-duration events that produce distortions such as notching, ringing, and impulse.</p> <p>(A) Power frequency disturbances</p> <p>(B) Power system transients</p> <p>(C) Power system harmonics</p>	L1

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Course/Branch : B.E., / EEE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : EE8501	Subject Name : Power System Analysis	Rev. No.	02
Unit No : V	Unit Name : Stability Analysis	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

	(D) Electro Static discharge	
31	<p>Grounding is done (i) for safety (ii) to provide a low-impedance path for the flow of fault current in case of a ground fault (iii) to create a ground reference plane for sensitive electrical equipment</p> <p>(A) Only (i) (B) Only (ii) (C) (i) & (ii) (D) (i), (ii), (iii)</p>	L2
32	<p>_____ refers to the interaction between electric and magnetic fields and sensitive electronic circuits and devices.</p> <p>(A) Radio frequency interference (B) Power frequency disturbances (C) Electromagnetic interference (D) Power system harmonics</p>	L2