

No.	Question	Option A	Option B	Option C	Option D
1	Which generating plant can be run-up and synchronized very fast?	Thermal	Hydro	Diesel	Gas based
2	What is the overall efficiency of thermal power station ?	20 -30%	30 ± 8%	50-70 %	more than 80%
3	What is the approximate installed generating capacity of Gujarat ?	15000 MW	10000 MW	20000MW	30000MW
4	Turbo alternator runs at ...	2000 rpm variable speed	Constant 1000 rpm	Constant 3000 rpm	Variable speed of 1000 rpm
5	The energy radiation by sun on a bright sunny day is about...	2.5 kW/mt<SUP>2</SUP>	1.0 kW/mt<SUP>2</SUP>	0.5 kW/mt<SUP>2</SUP>	1750 W/mt<SUP>2</SUP>
6	10 KVA, 400/200 V single phase transformer with a resistance of 3% and reactance of 6% is supplying a current of 50A to a resistive load. The voltage across the load is ....	194V	198V	298V	191V
7	Which of the following test should be carried out to compute the equivalent circuit constants R0 and X0 of the transformer?	Short Circuit	Open Circuit	None of the options	Both A and B
8	In a power transformer iron losses remain practically constant from no load to full load this is because ....	Frequency is fixed	leakage flux does not vary	core flux remains same	All the above
9	If the percentage resistance of a power transformer for secondary side is 2.5% and turns ratio is 1:10 the % secondary resistance referred to primary will be ...	25	2.5	0.25	0.0025
10	What is the unit of synchronizing coefficient 'T' ?	MW-s	MW/s	MW.rad	MW/rad
11	In a transformer, zero voltage regulation at full load is	Not possible	Possible at unity power factor load	Possible at leading power factor load	Possible at lagging power factor load
12	The characteristic impedance of a transmission line with series impedance Z ohm per unit length and shunt admittance Y mho per unit length is given by	$(Z+Y)^{1/2}$	$(Z+Y)^{2/2}$	$(Z/Y)^{1/2}$	$(L/C)^{1/2}$
13	Which of the following combination of three-phase transformer connections can successfully operate in parallel?	Y-Y and Δ-Δ	Δ-Y and Y-Δ	Δ-Y and Δ-Y	None of these
14	The permissible variation of frequency in power systems is	± 6%	± 5%	± 3%	± 2%
15	Stringing chart is useful	for finding sag in the conductor	in the design of insulator string	in design of tower	finding distance between towers
16	The voltage of a particular bus can be controlled by controlling the	Phase angle	Active power of the bus	Reactive power of the bus	Phase angle and reactive power
17	A long line under no load conditions, for a good voltage profile needs,	Shunt resistance at receiving end	Shunt capacitance at receiving end	Shunt reactors at receiving end	All of the above
18	The coefficient of reflection for a short circuited line is	1	0	-1	infinity
19	If δ is the loss angle of the cable then its power factor is	sin δ	Power factor is independent of δ	cos δ	tan δ
20	The bus admittance matrix of a power system is not symmetrical when	shunt is connected	phase shifting transformer is connected	line is not modeled properly	can't say
21	Which information is available from the "penalty factor"?	change in loss of the line	loss of the line	incorporating loss in economic operation of plant	incorporating loss in economic operation of generating stations
22	For economic operation of the generating plant all units should have	equal loads	load proportion to the ratings	equal incremental cost	equal regulation
23	In a power station, the cost of generation of power reduces when	diversity factor alone increases	load factor alone increases	both diversity factor and load factor increase	both diversity factor and load factor decrease
24	The reactive power transfer over a line mainly depends on...	The power angle	voltage magnitude difference	Sending end voltage	receiving end voltage
25	In a D.C. transmission line which statement is true?	it is necessary for sending and receiving end to be operated in synchronism	there are no effects due to inductive and capacitive reactances	the effects of inductive and capacitive reactances are greater than in ac transmission line of the s	power transfer capability is limited by stability considerations
26	For an existing ac transmission line the string efficiency is 80%. Now if dc voltage is supplied for the same set up, the string efficiency will be	80.00%	Less than 80%	More than 80%	100.00%
27	In G-S method of power flow problem, the number of iterations may be reduced if the correction in voltage at each bus is multiplied by	Deceleration constant	Gauss Constant	Acceleration constant	Blocking factor
28	If the positive, negative and zero sequence reactance of an element of a power system are 0.3, 0.3 and 0.8 respectively, then the element would be a	synchronous generator	static load	synchronous motor	transmission line
29	For a power transmission network, a feeder feeds power to ....	service mains	generating stations	distributors	all of the above
30	String efficiency can be improved by	using shorter cross arm	using a guard ring	insulator disc of same size	any of the above.
31	The burden of over current relay is helpful in deciding	transformation ratio of CT	VA rating of CT	transformation ratio of PT	VA rating of PT
32	The ratio of drop off value to pick-up value of a relay is known as	CT ratio	PT Ratio	Holding ratio	Tripping ratio
33	Resistance grounding is used for voltages	below 220 V	between 3.3 kV to 11 kV	up to 660 V	above 66 kV.
34	The disadvantage offered by ungrounded systems is	frequent arcing grounds	voltage oscillations	difficult earth fault relaying	all of the above.

35	In overhead transmission lines the effect of capacitance can be neglected when the length of line is	less than 200 km	less than 120 km	less than 150 km	less than 80 km
36	In two area ALFC case ACE is ....	change in frequency	change in tie line power	combination of both a and b	None of these
37	Damping of frequency of oscillations for two area system is more with...	low R	High R	$R = \alpha$	None of these
38	Unit of Speed Regulation(Droop R)is ....	Hz/MVAR	Hz/MVA	Hz/MW	Hz. SEC
39	Smaller the lagging reactive power drawn by a circuit it's power factor will be	better	poorer	unity	can't say
40	Load compensation includes ...	p.f. correction	voltage regulation	load balancing	all of these
41	Voltage stability analysis is carried out by which power flow based method?	P-V Curves	Q-V Curves	both A and B	None of these
42	Steady state stability limit of unit occurs when power angle is .....degree.	30	45	90	0
43	Series compensation results in ...	increase in Pmax	decrease in transmission angle	increase in virtual SIL	All the above
44	The degree of unbalance between real power generation and real power demand is indicated by the index....	speed regulation R	Change in voltage	Frequency error	None of these
45	The inertia constants of two groups of machines which do not swing together are M1 and M2. the equivalent inertia constant of the system is	$M1+M2$	$M1*M2/(M1+M2)$	$M1-M2$	$\sqrt{M1}\sqrt{M2}$
46	State estimation scheme uses ...	lagrangian function method	negative gradient method	lyapunov method	weighted least square method
47	Which are the state variables in power systems?	Voltage and current	voltage and voltage angle	real power and reactive power	power and power factor
48	in practical power system state estimation using N R method how many swing bus(s) are required	0	1	2	3
49	For transient stability of power system	$\partial P/\partial t > 0, \partial P/\partial \delta < 0$	$\partial P/\partial t < 0, \partial P/\partial \delta > 0$	$\partial P/\partial t > 0, \partial P/\partial \delta > 0$	$\partial P/\partial t < 0, \partial P/\partial \delta < 0$
50	If 3 MW power is to be transmitted over a distance of 30 km, the desirable transmission voltage will be	33 kV	132 kV	66 kV	220 kV
51	Stability of a system is not affected by	Reactance of line	Losses	Reactance of generator	Output torque
52	A L-G ( line to ground)fault occurs on the star side of a feeder of a 3-phase star-delta transformer , the same fault appears on delta side as	L-L faults	L-L-G fault	L-G fault	L-L-L faults
53	If a new bus is added in the power system network then size of the Ybus of N X N matrix will	remain same	$N-1 \times N+1$	$N+1 \times N+1$	$N-1 \times N-1$
54	In a 400 kV power network, 360 kV is recorded at a 400 kV bus. The reactive power absorbed by the shunt reactor rated for 50 MVAR, 400 kV connected at the bus is	61.73 MVAR	45.0 MVAR	55.56 MVAR	40.5 MVAR
55	In a three generator power system one generator G1 has a speed governor which maintains its speed constant at the rated value while other generators (G2 and G3) have governors with a droop of 5%. If the load of the system is increased, then in stead	generation of G2 and G3 increases equally while that of G1 remains unchanged	generation G1,G2 and G3 is increased	generation of G1 alone is increased while that of G2 and G3 remain unchanged	generation G1,G2 and G3 is increased equally 0.5, 0.25 and 0.25
56	Two alternators each having 4% speed regulation are working in parallel. Alternator 1 is rated for 12 MW and alternator 2 is rated for 8 MW. When the total load is 10 MW, the load shared by alternators 1 and2 would be respectively	4 MW and 6 MW	5 MW and 5 MW	6 MW and 4 MW	10 MW and zero
57	A voltage controlled bus is treated as a load bus in subsequent iteration in GS method when	Active power limit is violated	Voltage limit is violated	Phase angle limit is violated	Reactive power limit is violated
58	For stability reasons we operate the transmission line with power angle in the range	25 to 45 degree	60 to 75 degree	65 to 80 degree	above 45 degree
59	SSR (Sub-synchronous resonance) phenomenon is	electrical	hydraulic	mechanical	both (a) and (b)
60	For a load flow solution the quantities specified at the generator bus are	Q and  V	P and Q	P and $\delta$	P and  V
61	If the time of operation of a relay for unity TMS is 10 sec, the time of operation for 0.4 TMS will be	10 sec	25 sec	4 sec	50 sec
62	If a fault occurs near the relay, the V/I ratio will be	Lower than that if the fault occurs away from the relay.	Higher than that if the fault occurs away from the relay.	Constant for all distances.	Will be initially constant and then increase.
63	The protection from negative sequence current s is provided for	Transformers	Transmission lines.	Generators	Motors.
64	The CT whose operating point is near the knee point is the	Protective CT	Measuring CT	Both measuring and protective CT	Capacitive CT.
65	$30^\circ$ , $60^\circ$ and $90^\circ$ connections are provided in a directional relay	To render the relay maximum torque under fault conditions.	To render the relay minimum torque under fault conditions.	To render the relay zero torque under fault conditions.	To render the relay constant torque under fault conditions.
66	The property by virtue of which a protective relay is able to distinguish between normal and abnormal conditions is called	Sensitivity	Discrimination	Stability	Reliability

67	The type of back-up protection which is generally used in the protective systems is	Remote back-up	Breaker back-up	Relay back-up	Isolator back-up
68	For the protection of a large single phase induction motor against single phasing, normally	A directional relay is used.	An over current relay is used.	Negative sequence current sensitive relay is used.	A differential relay is used.
69	The protection against over-voltages due to lightning is provided by	Use of Surge diverters.	Use of overhead ground wires.	Low tower footing resistance.	All of the above.
70	To prevent mal-operation of differentially connected relay while energizing a transformer, the relay restraining coil is biased with	Second harmonic current.	Third harmonic current.	Fifth harmonic current.	Seventh harmonic current.
71	Problems associated with differential protection are	Magnetizing in-rush current.	Change of ratio as a result of tapping.	Mismatch characteristics of CT's	All of the above.
72	Field failure in an alternator occurs due to	Failure of exciter.	Failure of exciter and faulty field circuit breaker.	Faulty field circuit breaker.	In-rush of large currents.
73	The relay best suited for phase fault relaying for medium transmission lines is	Impedance relay.	MHO relay.	Reactance relay.	Over current relay.
74	A Buchholz relay is used for	Protection of transformer against all internal faults.	Protection of transformer against all external faults.	Protection of transformer against all internal and external faults.	Protection of induction motors.
75	An isolator is meant for	Breaking abnormal currents.	Breaking the circuit under no load condition.	Making under fault condition.	Breaking the circuit under full load condition.
76	A synchronous generator is feeding a zero power factor (lagging) load at rated current. The armature reaction is	demagnetizing	magnetizing	cross-magnetizing	ineffective
77	For the Y-bus matrix of the system, the buses having shunt elements can be identified by	adding all raw elements	adding all diagonal elements	not possible to find from Y-bus	None of these
78	Zbus matrix is preferred over Ybus matrix for fault studies because...	It is a full matrix	It give node impedance directly in certain condition	it is easy to find Zbus matrix	All the above
79	Ferranti effect in a transmission system is because of..	Inductive effect of transmission line	Inductive effect of transmission line	Corona	Capacitive effect of transmission line
80	The number of discs in a string insulators for 400 KV ac overhead transmission lies in the range of	36 to 41	20 to 24	15 to 18	10 to 14
81	"KUCHIPUDI" dance is from _____ state of the India	Kerala	Tamilnadu	Karnataka	Andhrapradesh
82	When it is 1.30 AM in Ahmedabad, the Time in London would be about	8.00PM	7.00 AM	8.00 AM	7.00 PM
83	Which of the following is the eastern most city?	Patna	Gwalior	Agra	Delhi
84	Which one among the following planets is nearest to the Sun?	Jupiter	Uranus	Mars	Mercury
85	Which one of the following freedom fighters coined slogan "Jai Hind"	Sardar Patel	J. L. Nehru	S. C. Bose	B. G. Tilak
86	Which of the following is a fundamental Right in India?	Right to speak	Right to information	Right to property	Cultural and Educational Rights
87	How many District are there in Gujarat?	26	33	31	29
88	Which satellite has been launch by India in last month?	Mars Orbiter Mission	GSAT-14	INSAT 7	ARYABHATA
89	Who is the education minister of Gujarat?	Anandiben Patel	Ramanlal Vora	Bhupendrasinh Chudasama	Nitinbhai Patel
90	Speed of light in the air is	3,00,000 km/sec	3,00,000 mt/sec	330 mt/sec	1,00,000 km/sec
91	She _____ in any crown because she is very beautiful and attractive	stands aside	stands out	stamps up	stamps out
92	My friend, who considers himself an excellent driver, was put off when he saw so many cars easily _____ us	catching up with	catching at	taking over	taking on
93	A writer is always having his own vision of life	always is having	every time is having	every time will have	always has
94	He eat nothing and leaves his cottage to go to work.	He is eating nothing	He eats nothing	He is eating something	He eats anything
95	Give synonym of COMBUSTION	IGNITION	EXPLAIN	SHRINKAGE	STRENGTH
96	Give antonym of REVILE	EXTOL	CRITICIZE	EXCORIATE	REVERT
97	Give synonym of SPRIGHTLY	HONEST	DRUNKEN	JAUNTY	DETACHED
98	Give antonym of CATACLYSM	DISASTER	SALVATION	ALTRUISM	CITADEL
99	In our country agriculture must _____ pace with industrial development	take	make	keep	lack
100	The army has prepared a plan action to tear _____ the terrorist outfits	up	off	into	apart