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	(Δ)	20 W	(B)	980 W
11	(C) (C)	500 W	(D)	200 W
2	High-s	peed alternators are driven by		code
	(A)	diesel engines	(B)	hydraulic turbines
	(C)	steam turbines	(D)	None of the above
3.	Ideal	voltage source have	ita	on be
	(A)	zero internal resistance	(B)	infinite internal resistance
	(C)	low value of current	(D)	large value of e.m.f.
4.	Water	hammer occurs in		
	(A)	surge tank	(B)	penstock
	(Ć)	turbine	(D)	draft tube
_		NG		
).	The of	oposite of susceptibility is		
	(A)	Immunity	(B)	Emission
11	(C)	Interference	(D)	Electromagnetic compatibility
ò.	Any el	ectrical signal present in a circuit othe	er than the desir	red signal is known as
	(A)	Noise	(B)	Distortion
	(C)	Interference	(D)	All of these
7.	The st	ring efficiency of a string of suspension	n insulators is de	ependent on
	(A)	size of insulators	(B)	number of discs in the string
	(C)	size of tower	QU ^C (D)	none of the above
3.	A 50 H	z, 4-pole single-phase induction motor	r will have a syn	chronous speed of
	(A)	1500 r.p.m.	(B)	750 r.p.m.
	(C)	1200 r.p.m.	(D)	none of the above
).	A circ	uit breaker is a		
	(A)	current controlling device	(B)	circuit interrupting device
11	(C)	current limiting device	(D)	none of the above
0.	An ove	ercurrent relay having current setting of	of 125% is conne	cted to a supply circuit through a current
	transf	ormer of 400/5 A. The pick-up current	15	
	(A)	0.20 A	(B)	
	(C)	3.123 A	(D)	BOOM
1.	The a	rc voltage in a circuit breaker	cti	011
	(A)	is in phase with arc current	C(B)	lags arc current by 90°
	(C)	leads arc current by 90°	(D)	lags arc current by 180°
2.	When	3-phase system is balanced, the neutra	al wire carries	
	(A)	no current	(B)	one-third of current for each phase
	(C)	half of current for each phase	(D)	none of the above
3.	Which	of the following has highest permeabi	lity?	N
	(A)	Paramagnetic material	(B)	Diamagnetic material
11	(C)	Ferromagnetic material	(D)	Vacuum
and a second sec	1			10

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 ad factor of a power station is defined as maximum demand / average load average load / maximum demand average load / maximum demand b) average load / maximum demand c) average load / maximum demand c) average load / maximum demand c) Seebeck effect c) Raman effect c) Raman effect c) Ary weather c) a single phase induction motor running at a slip ference to backward field is c) 0 c) 1.95 c) electric iron drawing 9 A from 120 V supply maximum demand c) 0 c) 0.6 kWh c) 2 times c) 4 times 	(B) (D) ng end of th (B) (D) ona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	average load X maximum demand (average load X maximum demand) ^{1/2} he open-circuited or lightly loaded line is called Ferranti effect None of the above winter humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 maximum demand / average load average load / maximum demand average load / maximum demand be phenomenon of rise in voltage at the receiving the phenomenon of rise in voltage at the receiving seebeck effect Seebeck effect Raman effect Raman effect a single phase induction motor running at a slip ference to backward field is 0 1.95 n electric iron drawing 9 A from 120 V supply match 1080 W 0.6 kWh the capacitance of a system is doubled, then its 2 times 4 times 	(B) (D) ng end of th (B) (D) ona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	average load X maximum demand (average load X maximum demand) ^{1/2} he open-circuited or lightly loaded line is called Ferranti effect None of the above winter humid weather th reference to forward field, the slip with 0.95 2.0 Tated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
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 a phenomenon of rise in voltage at the receiving b) Seebeck effect c) Raman effect b) Raman effect c) dry weather c) summer heat c) summer heat c) a single phase induction motor running at a slip ference to backward field is c) 0 c) 1.95 c) electric iron drawing 9 A from 120 V supply matcher c) 0 c) 0.6 kWh c) 0.6 kWh 	ng end of th (B) (D) ona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	he open-circuited or lightly loaded line is called Ferranti effect None of the above winter humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 he phenomenon of rise in voltage at the receiving Seebeck effect Raman effect here is a greater possibility of occurrence of cortexing a greater possibility of occurrence of cortexing a single phase induction motor running at a slipt of ference to backward field is 0 1.95 h electric iron drawing 9 A from 120 V supply mathematical mathematical mathematical supply and the capacitance of a system is doubled, then its 2 4 times 	ng end of th (B) (D) ona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	he open-circuited or lightly loaded line is called Ferranti effect None of the above winter humid weather th reference to forward field, the slip with 0.95 2.0 Tated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 Seebeck effect Raman effect Raman effect a greater possibility of occurrence of cortex dry weather summer heat a single phase induction motor running at a slipt ference to backward field is 0 1.95 n electric iron drawing 9 A from 120 V supply matched with the capacitance of a system is doubled, then its 2 times 4 times 	(B) (D) ona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	Ferranti effect None of the above winter humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 Seebeck effect Raman effect here is a greater possibility of occurrence of cortexing of the dry weather summer heat a single phase induction motor running at a slipt of the dry weather field is 0 1.95 n electric iron drawing 9 A from 120 V supply matched with the capacitance of a system is doubled, then its 2 times 4 times 	(B) (D) ona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sta (B) (D)	Ferranti effect None of the above winter humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
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here is a greater possibility of occurrence of cor dry weather summer heat a single phase induction motor running at a slip ference to backward field is 0 1.95 n electric iron drawing 9 A from 120 V supply ma 1080 W 0.6 kWh the capacitance of a system is doubled, then its 2 times 0 4 times	rona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	winter humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 a greater possibility of occurrence of cortexity of a greater possibility of occurrence of cortexity of a greater possibility of occurrence of cortexity of a greater possibility of occurrence of a signal a greater possibility of occurrence of a greater possibility of occurrence of	ona during (B) (D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	winter humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 dry weather summer heat a single phase induction motor running at a slip ference to backward field is 0 1.95 n electric iron drawing 9 A from 120 V supply matched 1080 W 0.6 kWh the capacitance of a system is doubled, then its 2 times 4 times 	(B) (D) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	winter humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 summer heat a single phase induction motor running at a slip ference to backward field is 0 1.95 n electric iron drawing 9 A from 120 V supply match 1080 W 0.6 kWh the capacitance of a system is doubled, then its 2 times 4 times 	(D) o of 5 % wit (B) (D) ains is opera (B) (D) s energy sto (B) (D)	humid weather th reference to forward field, the slip with 0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
a single phase induction motor running at a slip ference to backward field is) 0) 1.95 n electric iron drawing 9 A from 120 V supply ma) 1080 W) 0.6 kWh the capacitance of a system is doubled, then its) 2 times) 4 times	o of 5 % wit (B) (D) ains is oper- (B) (D) s energy sto (B) (D)	th reference to forward field, the slip with 0.95 2.0 Tated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 a single phase induction motor running at a slip ference to backward field is 0 1.95 a electric iron drawing 9 A from 120 V supply match 1080 W 0.6 kWh a capacitance of a system is doubled, then its 2 times 4 times 	ains is oper (B) (D) ains is oper (B) (D) s energy sto (B) (D)	th reference to forward field, the slip with 0.95 2.0 Tated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 aference to backward field is b 0 c) 1.95 c) 1.95 c) 1080 W c) 0.6 kWh c) 0.6 kWh c) 1080 the capacitance of a system is doubled, then its c) 2 times c) 4 times 	(B) (D) ains is oper (B) (D) s energy sto (B) (D)	0.95 2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 a) 0 b) 1.95 c) 1.95 c) 1080 W c) 0.6 kWh c) 0.6 kWh c) 2 times c) 4 times 	(B) (D) ains is oper- (B) (D) s energy sto (B) (D)	0.95 2.0 Tated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 c) 1.95 n electric iron drawing 9 A from 120 V supply matched as a second structure of a system is doubled, then its and the capacitance of a system is doubled, then its and the second structure of a system is doubled, then its and the second structure of a system is doubled, then its and the second structure structu	(D) ains is oper (B) (D) s energy sto (B) (D)	2.0 rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
n electric iron drawing 9 A from 120 V supply ma 1080 W 0.6 kWh the capacitance of a system is doubled, then its 2 times 4 times	ains is oper (B) (D) s energy sto (B) (D)	rated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 h electric iron drawing 9 A from 120 V supply matched and the supply matched at the supply matched at	ains is oper (B) (D) s energy sto (B) (D)	ated for 20 minutes, the energy consumed is 3 Ah 360 Wh ored becomes unaltered
 1080 W 0.6 kWh the capacitance of a system is doubled, then its 2 times 4 times 	(B) (D) s energy sto (B) (D)	3 Ah 360 Wh ored becomes unaltered
 0.6 kWh the capacitance of a system is doubled, then it: 2 times 4 times 	(D) s energy sto (B) (D)	ored becomes unaltered
the capacitance of a system is doubled, then its) 2 times) 4 times	s energy sto (B) (D)	ored becomes unaltered
 the capacitance of a system is doubled, then it: 2 times 4 times 	s energy sto (B) (D)	unaltered
a) 2 times C) 4 times	(B) (D)	unaltered
c) 4 times	(D)	
		none of the above
		<u>op</u> <u>v</u>
n unsaturated shunt motor runs at its rated spee	ed when rat	ted voltage is applied to it. If the supply voltage
the motor is reduced by 25% the speed of the r	notor	
() increases by 25%	(B)	remains the same
decreases by 25%	(D)	increases slightly
nower plant operates at an annual load factor of	of 80% with	an average load of 120 MW. If the load factor
lls to 60%, the average load on the plant would	he	
() 200 MW	(B)	160 MW
c) 90 MW	(_) (D)	72 MW
,	()	
ne following electrical measuring instrument de	pend on ch	emical effect for its action
) Ammeter	(B)	Voltmeter
c) D.C. Ampere - Hour meter	(D)	None of the above
		ulat Us
ollowing parameter(s) may affect the performan	ice of a mo	otor
) Voltage unbalance & Voltage variation	(B)	System harmonics
c) Altitude & Ambient temperature	(D)	All of the above
	Jesu	
hen load is removedmotor will	run at the	highest speed.
) Series	(B)	Shunt
Cumulative compound	(D)	Differential compound
series motor is best suited for driving		
) Lathes	(B)	Cranes and hoists
Shears and punches	(D)	Machine tools
,	()	
11		_ II
		"
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	 n unsaturated shunt motor runs at its rated speed the motor is reduced by 25% the speed of the r increases by 25% decreases by 25% power plant operates at an annual load factor of lls to 60%, the average load on the plant would 200 MW 90 MW e following electrical measuring instrument def Ammeter D.C. Ampere - Hour meter bllowing parameter(s) may affect the performant Voltage unbalance & Voltage variation Altitude & Ambient temperature hen load is removed motor will Series Cumulative compound series motor is best suited for driving Lathes Shears and punches 	a unsaturated shunt motor runs at its rated speed when rational the motor is reduced by 25% the speed of the motor is increases by 25% (B) (D) (D) (D) (D) (D) (D) (D) (D) (D) (D

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		• • • • • •	2			
26. W	Which one of the following load would be best dr	iven by a d.	.c. compound motor ?			
(/	A) Reciprocation pump	(B)	Centrifugal pump			
((C) Electric locomotive	(D)	ran (N			
27 4	s compared to underground system, the overhea	ad system is				
S. []	Δ more expensive	(B)	less flexible			
(*	C more flexible	(D)	None of the above t			
(((D)	None of the above			
^{28.} т	be electrical conductivity of metals is typically	of the order	r of (in ohm (m^{-1})			
()	Δ) 107	(B)	0105			
(*	() $()$ $()$					
((⁽⁾ 10 ⁴		10 °			
29 A	n electromagnetic field is radiated from					
-0. A	A) a stationery point charge	(B)	a capacitor with a d c voltage			
(/	C) a stationery point charge	(B)	a capacitor with a d.c. voltage			
((a conductor carrying a d.c. current	(D)	an oscillating offole			
30. A	generating station has an installed capacity of !	50,000 kW a	and delivers 220 X 10º units per annum. If the			
a	nnual fixed charges are Rs.160 per kW installed	capacity an	nd running charges are 4 paise per kWh, the cost			
p	er unit generated is		E 02 series			
1 0	A) 4.38 paise	(B)				
) ((C) 7.64 paise	(D)	11.72 paise			
s1. W	What is the efficiency of a power plant if the effi	ciencies of	the boiler, turbine and generator are 88.40 and			
9	8% respectively ?		sere a sere a sere a sere a cos royana			
()	A) 88%	(B)	40% 8001			
	() 35%		98%			
((J. J	SIL				
2. A	thermal generating station has an installed cap	acity of 15	MW and supplies a daily load of 10 MW for 12			
h	ours and 5 MW for remaining 12 hours. The plant	t capacity f	actor for this station is			
()	A) 1 155 .	(B)	0.75			
()	0.67	(_)	0.5			
(
33. T	he no. of turns in a secondary coil is twice the n	umber of to	urns in the primary. A cell of 1.5 ${f V}$ is connected			
a	cross the primary. The voltage across the second	dary is				
(/	A) 1.5 V	(B)	3 V			
(C	C) 0.75 V	(D)	zero			
<u>"P</u>			×" ×			
4. A	100 MW power station delivers 100 MW for 2 ho	urs. 50 MW	for 6 hours and is shut down for the rest of each			
a	ay. It is also shut down for maintenance for 45 c	ays each ye	ear. Energy supplied per year is			
(/	A) 12 X 10 ⁴ MWh	(B)	8 X 10 ⁴ MWh			
(0	C) 6 X 10 ⁵ MWh	(D)	16 X 10⁴ MWh			
		6	on P			
5. T	The current taken from a 230 V, 50 Hz supply is measured as 10 A with a lagging p.f. of 0.7. A capacitor is					
C	onnected in parallel with the load. The true pow	ver				
(/	A) increases	(B)	decreases			
(0	C) remains unchanged	(D)	cannot be predicted			
6 T	The normal current in a nower line is 100 A. If a	short-circuit	t fault occurs on the line, then one can expect			
0. 	he short-circuit current to be		t raute occurs on the time, then one can expect			
	Δ 200 Δ	(R)	300 4			
(/	-7	(D)	100 A			
((C) more than 1000 A	(D)	100 A			
N	11		¹¹ A			
, " F			10 "A			
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			okle.			

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	(A) 10	(B)	9
"	(C) 8	(D)	6 "A"
38.	A 3-phase induction motor draws a current of 50 A transformer with 60% tapping is used for starting the	from mai	ns when started by direct switching. If an auto
	(Λ) 50 A		
	(A) JUA (C) 36 A	(D)	83 3 10 0
		(D)	
39.	A power plant with a load factor of 0.5 produces e	nergy of 1	6,000 MWh with a maximum demand of 8000
	over a time period. For how many hours has the pl	ant been i	in operation ?
	(A) 8000 hrs.	(B)	4000 hrs.
	(C) 8760 hrs.	(D)	1000 hrs.
40.	Brass will have relative permeability, μ_r , equal to		
	(A) 2000	(B)	0
	(C) 1	(D)	1000
		()	
41.	An RLC circuit has a resonance frequency of 160 kH	Hz and a C	2-factor of 100. Its band width is
o ï	(A) 1.6 kHz	(B)	0.625 kHz
C	(C) 16 MHz	(D)	None of these
42.	A parallel plate air capacitor has a capacitance of	100 pfd. A	A p.d of 50 V is applied. The stored energy is
	joules.		BOOM
	(A) 1.25 X 10 ⁻⁷	(B)	2.50 X 10 ⁻⁷
	(C) 40 X 10 ⁻⁹	(CD)	20 X 10 ⁻⁹
	Q1	<u>,</u>	
43.	In the following Bus active and reactive powers are	e not spec	ified
	(A) Load Bus	(D)	None of the above
	(C) Slack bus	(D)	
44.	The meter that is suitable for only direct current n	neasurem	ents is
	(A) Moving-iron type	(B)	Permanent-magnet type
	(C) Electrodynamic type	(D)	Hot-wire type
45.	Merz-Price circulating current principles is more su	itable for	"A"
e	(A) Generators	(B)	Transformers
	(C) Both (A) \pounds (B)	(_) (D)	None of the above
			Kler
46.	A.C. Potentiometer can be used for the following		BOUL
	(A) Voltmeter calibration	(B)	Ammeter calibration
	(C) Testing of energy meters and wattmeter	10 ^(D)	All of the above
47.	An inverter circuit is employed to convert		
	(A) a.c. voltage into d.c. voltage	(B)	d.c. voltage into a.c. voltage
	(C) high frequency into low frequency	(D)	low frequency into high frequency
19	A chart circuit between and line and ground warr	often com	rod by physical contact is known as
40.	(A) Single-Line-to-Ground-Fault	(B)	Line-to-line Fault
	(C) Double line-to- Ground-Fault	(D)	None of the above
	<i>"</i>		

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49.	The following contact is large	elv used for low-voltage oil cir	cuit breaker
	(A) Tulip type contacts	(B)	Finger and wedge contacts
	(C) Butt Contact	(D)	None of the above
<i>''</i>			
50	An alternator is supplying a	load of 300 kW at a p.f. of 0.6	lagging of the p.f. is raised to unity how many
50.	more kW can alternator sup	10au 01 500 kw at a p.1. 01 0.0	lagging. If the p.r. is faised to thirty, now many
		(P)	
	(A) 200 kW	(B)	
	(C) 300 kw	(D)	
			101
51.	Rs. 3000 on straight line me	osting Rs. 50,000 has a salvage thod, the useful life of the trar	value of Rs. 5000. If annual depreciation charge is is is solved and the second s
	(A) 10 years	(B)	15 years
	(C) 5 years		25 years
52.	The most efficient form of c	amping employed in electrical	instruments is
	(A) Air friction	(B)	Fluid friction
	(C) Eddy currents	(D)	None of the above
53.	An industrial installation has	a power factor of 0.8 lagging.	It would be economical to improve pf to
11	(A) unity	(B)	about 0.8 lagging
2,	(C) about 0.95 lagging	(D)	about 0.95 leading
	(0) 200000000000000000000000000000000000	(2)	COUS
54.	Compared to steam engines	, the internal combustion engin	es have
	(A) much nigher therma	(B)	steam engines
	(C) much lower thermal	efficiency	Ccan have lower or higher thermal efficiency
55.	a 1000 kVA transformer has	a reactance of 5%. Its reactance	e at 2000 kVA base is
	(A) 5%	(B)	2.5%
	(C) 20%	(D)	10%
56.	If the percentage reactance circuit kVA is	of the system up to the fault p	oint is 20% and base kVA is 10000, then short-
	(A) 10,000 kVA	(B)	50,000 kVA
	(C) 500 kVA	(D)	30,000 kVA
57.	In a hydroelectric project, c	atchment area = 5 X 10 ⁹ m ² ; a	nnual rainfall = 1.25 m and yield factor = 80%. The
	volume of water which can	be utilized per annum is	COUC
	(A) $2.5 \times 10^7 \text{ m}^3$	(B)	5 X 10 ⁹ m ³
	(C) 6.5 X 10 ⁸ m ³	(D)	7.5 X 10 ⁶ m ³
58.	A steam power station has a	n overall efficiency of 20% and	0.6 kg of coal is burnt per kWh of electrical
		inc value of fuel is	5152 kcal /kg
	(A) 7100 KCal/kg		5152 KCal/Kg
	(C) 2458 Kcal/Kg		none of the above
59.	An energy meter having a m	eter constant of 1200 rev. per	kWh is found to make 5 revolutions in 75 seconds.
		(P)	100 W
	(A) 500 W	(B)	1000 W
	(C) 200 W	(D)	1000 W
	л ¹¹		" N ["]
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Questions 100

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$P_{A}^{(1)}$ 0.2 MQ (B) 2 MQ (C) 4 MQ (D) 8 MQ 1. In a 3-wire d.c. system, the load on the +ve side is 400 A and on -ve side it is 300 A. Then current in neutwire is (A) 50 A (B) 100 A (C) 350 A (D) 150 A 2. The voltage drop is the main consideration while designing a service mains (A) feeder (B) service mains (C) distributor (D) none of the above 3. The transient phenomenon lasts in a power system for a period ranging from (A) ts to 2 s (C) 2 s to 3 s (D) greater than 3 s 4. The feeder is designed mainly from the point of view of (A) ts current carrying capacity (B) voltage drop in it (C) operating voltage (D) operating frequency (C) 5. If the fault current is 2000 A, the relay setting 50% and C.T. ratio is 400/5, the plug setting multiplier will (A) 15 (D) 50 6. The time-current graph of a fuse (B) is a circle (A) has linear char	50 km length will
(C) 4 MQ (D) 8 MQ 1. In a 3-wire d.c. system, the load on the +ve side is 400 A and on -ve side it is 300 A. Then current in neut wire is (A) 50 A (B) 100 A (C) 350 A (D) 150 A (C) 350 A (D) 150 A (C) distributor (D) none of the above 3. The transient Dhenomenon lasts in a power system for a period ranging from (A) feeder (A) feeder (B) service mains (C) (C) distributor (D) none of the above 3. The transient Dhenomenon lasts in a power system for a period ranging from (A) feeder (A) feeder (B) is to 2 s (C) (C) 2 s to 3 s (D) greater than 3 s 4. The feeder is designed mainly from the point of view of (A) its current carrying capacity (B) voltage drop in it (C) operating voltage (D) operating frequency (D) operating frequency 5. If the fault current is 2000 A, the relay setting 50% and C.T. ratio is 400/5, the plug setting	" \"
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	72.	Which of the following relays is used on long tra	ansmission line	25?	1
		(A) Impedance relay	(B)	Mho's relay	
	11	(C) Reactance relay	(D)	None of the above	
2	0			de h	
00	73.	During a test on 6 kVA transformer it is found t	hat iron losses	are 120 W, full load copper losses are 200 W.	
		The total losses at half full load will be		let	
		(A) 80 W	(B)	160 W	
		(C) 320 W	(D)	170 W	
			ti	<u>D</u> // -	_
	74.	A delta-delta, 3-phase transformer bank will ha	ive a phase shi	ift between the primary and secondary voltages	
				20°	
		(A) 0	(B) (D)	20°	
			(D)	-30	
	75	A transformer gives maximum efficiency when	it operates at	full load. Total losses at full load are 400 W	-
	10.	Copper losses at half load are	it operates at		10
		(A) 200 W	(B)	400 W	11
		(C) 100 W	(D)	50 W	
			()	11	
	76. 🛝	Two bulbs which are identical consume 50 watt	s each when c	connected in parallel across a 100 V source. If	-
-4	9	the bulbs are connected in series across the sar	me supply, the	ey consume	
00		(A) 100 W	(B)	50 W	
		(C) 75 W	(D)	25 W	
				BOON	-
	11.	In an AC circuit, the current & voltage are out	of phase by 90	degrees. The ammeter reads 2A and voltmeter	
		reads 1000 \mathbf{v} . The power consumed is	10G	2000 W	
		(R) 200 (C) 1000 W		180 W	
			(D)		
	78.	The transformer has turns ratio of 4 : 1. The re	sistance of the	HV winding is 8 ohms and that of the LV	-
		winding is 1 ohm. The total resistance on HV si	de in ohms is		
		(A) 9	(B)	8.25	- 1
		(C) 24	(D)	9.5	\mathcal{N}
					_
	79.	The pitch of Arc with 96 stator slots and 6 pole	is		
	11	(A) 36	(B)		
2	0.	(C) 48	(D)	32	
00	00	Which of the following is moderator in a pusion	r nowor roact	~~~ <u>COUU</u>	-
	00.	(A) Beryllium	(R)		
		(C) Cadmium	(D)	Thorium	
			(D)		
	81.	Three balanced delta-connected resistors consu	ume a power o	f 1500 W from a symmetrical 3-phase supply. If	-
		these resistors are reconnected in star across the	he same supply	y, the power consumed would be	
		(A) 1500 W	(B)	4500 W	
		(C) 500 W	(D)	1000 W	
					_
	82.	In a series circuit, under resonant condition, th	e following qu	antities are maximum	
		(A) Voltage and Current	(B)	Current and Power factor	
		(C) Impedance and Current	(D)	Impedance and Power factor	14
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83	3.	A tran	sformer 2000 kVA, 250 Hz is operative	ated at 50 Hz, kVA ra	ating should be revised to	
		(A)	20,000 KVA	(B)	400 kVA	
10	"	0	10,000 KVA	(D)	same 10 "A	
84	ŀ.	A d-c	shunt motor runs at rated speed.	If its field circuit get	s open circuited, the motor speed	
		(A)	decreases drastically	(B)	remains unchanged	
		(C)	increases dangerously	(D)	fluctuates around its previous speed	
85	5.	Hay's	bridge is particularly useful for m	easuring	on	
		(A)	inductive impedance with large	phase angle (B)	mutual inductance	
		(C)	self-inductance	(D)	capacitance and dielectric loss	
86	б .	The fa	ct that a conductor carries more	current on the surfa	ce as compared to core, is known as	
		(A)	Skin effect	(B)	Corona	
		(C)	Permeability	(D)	Unsymmetrical fault	1
87	' .	The fo	llowing is not a basic element of	a transformer		
		(A)	Primary winding	(B)	Secondary winding	
	11	(C)	Mutual flux	(D)	Core "_\"	
88	3.	The m	edium used for arc extinction in A	ABCB is	code	
		(A)	Oil	(B)	Air Lot Coord	
		(C)	SF ₆	(D)	Vacuum	
80	2	A low	oil circuit breaker has the followi	ing advantage over å	hulk oil circuit breaker	
00	<i>.</i> .	(A)	It requires a small space		The degree of carbonization is increased	
		(C)	Maintenance problems are incre	eased (D)	None of the above	
90).	A wav	e winding must go at least	around the armat	ure before it closes back where it started.	
		(A)	once	(B)	twice	
		(C)	thrice	(D)	four times	~
91		A four	-speed squirrel cage induction mo	otor uses state	or windings.	
		(A)	four	(B)	three	
		(C)	one	(D)	two	
92	2.	A volt	meter gives 120 oscillations per m	ninute when connect	ed to the rotor of an induction motor. The supply	
		freque	ency is 50 Hz. The slip of the moto	or is	COUL	
		(A)	2%	(B)	5%	
		(C)	25%	(D)	4% BOOK	
93	3.	An ove	erhead line conductor has a cross	sectional area of 3.2	cm ² . It is supported on level supports of a span	
		of 150	m. The specific weight of the co	nductor is 7800 kg/m	1 ³ , and the working stress is 1050 kg/cm ² . What	
		is the	working tension?	G	2444 hz	
		(A) (C)	3360 kg	(B)	2410 Kg 986 kg	
		(\mathbf{C})	5500 kg	(D)	700 kg	
94	ŀ.	The ro	otor voltage of a slip-ring inductio	n motor gives 120 os	cillations per minute when the motor is	~
		(A)	2 view to primase, point supply. The	e percentage stip of ז ים/		I
		(A) (C)	5	(D) (D)	6	
			-		11	
	11	P			"A	
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JSJE - QUESIIUN Please read the instructions carefully before attending the Question paper. All Questions are compulsory.

 5. Two colls have inductance L= 1200 mH and L= 800 mH. They are connected in such a way that flux in the two colls ismH. (A) 200 (B) 150 (C) 250 6. The name given to that property of a material which opposes the creation of magnetic flux in it is known as (A) Reluctance (B) Resistance (C) Permeance (D) None of the above 7. A network is said to be nonlinear if it does not satisfy (A) superposition condition (B) homogeneity condition (C) both superposition and homogeneity (D) associative condition 8. Transmission efficiency increases as (A) Series resonance (C) voltage and power factor both increase (D) both superposition (D) Corona effect (D) both superposition (D) both superpositin (D) bot			MG			1
(A) 13 June (B) 150 (C) 225 (D) 250 6. The name given to that property of a material which opposes the creation of magnetic flux in it is known as (A) Reluctance (B) Resistance (C) Permeance (D) Noie of the above 7. A network is said to be nonlinear if it does not satisfy (A) superposition condition (B) Anongeneity condition (C) both superposition and homogeneity (D) associative condition (C) voltage and power factor both increase (B) voltage and power factor both decrease (C) voltage increases but power factor decreases (D) voltage decreases but power factor increases 9. Q meters works on the principles of (B) Series resonance (A) breaking capacity (B) all of the above 00. The circuit breaker must have the following rating(s) (A) breaking capacity (A) breaking capacity (B) all of the above	95.	Two c two co	coils have inductance L ₁ = 1200 mH and L ₂ = 800 r oils aid each other and inductance is measured t	nH. The to be 25	ey are connected in such a way that flux in the 500 mH then Mutual inductance between the	
C) 225 C) 23 C) 23 C) 23 C) 23 C) 23 C) 23 C) 225 C) 25 C) The name given to that property of a material which opposes the creation of magnetic flux in it is known as (A) Reluctance (B) Resistance (C) Permeance (D) Noie of the above (D) associative condition (C) both superposition and homogeneity (D) associative condition (C) both superposition and homogeneity (D) associative condition (C) voltage and power factor both increase (D) voltage and power factor both decrease (D) voltage and power factor both decrease (D) voltage and power factor both decrease (D) voltage decreases but power factor increases (C) voltage increases as (A) Self-inductance (B) Series resonance (C) Stray magnetization (D) Corona effect (D) all of the above (C) short-time capacity (D) all of the above (C) short-time capacity (D) all of the above (D) Addition	11		200	(B)	150	
 6. The name given to that property of a material which opposes the creation of magnetic flux in it is known as (A) Reluctance (B) Resistance (C) Permeance (D) None of the above 7. A network is said to be nonlinear if it does not satisfy (A) superposition condition (B) homogeneity condition (C) both superposition and homogeneity (D) associative condition 8. Transmission efficiency increases as (A) voltage and power factor both increase (B) voltage and power factor both decrease (C) voltage increases but power factor decreases (D) Voltage increases but power factor decreases (D) The circuit breaker must have the following rating(s) (A) breaking capacity (B) all of the above 	8	(A) (C)	225	(D)		
(C) Permeance (b) None of the above 7. A network is said to be nonlinear if it does not satisfy (b) homogeneity condition (A) superposition condition (b) homogeneity condition (C) voltage and power factor both increases (c) voltage and power factor both increase (C) voltage increases but power factor decreases (c) voltage and power factor increases (D) Commeters works on the principles of (c) voltage increases but power factor (A) Self-inductance (c) Series resonance (C) Stary magnetization (D) Corona effect 00. The circuit breaker must have the following rating(s) (A) breaking capacity (A) breaking capacity (D) all of the above ***********************************	96.	The na (A)	ame given to that property of a material which o Reluctance	opposes (B)	the creation of magnetic flux in it is known as Resistance	
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9. Q meters works on the principles of (A) Self-inductance (B) Series resonance (C) Stray magnetization (D) Corona effect (A) breaking capacity (B) making capacity (C) short-time capacity (D) all of the above ************************************		(A) (C)	voltage increases but power factor decreases	(D)	voltage decreases but power factor increases	
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00. The circuit breaker must have the following rating(s) (A) breaking capacity (B) making capacity (C) short-time capacity (D) all of the above ************************************	0	(A) (C)	Self-inductance Stray magnetization	(B) (D)	Corona effect	
(C) short-time capacity (C) short-time capacity ************************************	100.	The ci	ircuit breaker must have the following rating(s)		BOOK	
MGVCL VSJE - Question Booklet Code "A"		(A) (C)	short-time capacity	(D)	all of the above	
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SLVSJE - QUESIIUN D Written test for the post of Vidyut Sahayak - Answer Key SET A (VS JE – 161021_A)

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