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JE Question paper 2012

Based on Memory

1.	What is the value of	of knee voltage of	silicon diode?	
	I) 0.3 V	2) 0.33 V	3) 0.7 V	4) 1.1 V
2.	Which organisation	n has proposed firs	t to constitute the Co	nstitution Assembly to
	form the Indian Co	onstitution?		
	l) Swaraj Party in	1928	2) Indian Nationa	al Congress in 1936
	3) Muslim League	in 1942	4) By all parties	convention in 1946
3.	There is 20 volt ac	cross the inductor a	and 15 volt across th	e resistance in the a.c.
	supplied series R-l	L circuit. What wo	uld be the supply vo	itage?
	1) 20 volt	2) 15 volt	3) 25 volt	4) 17.5 volt
4.	A transformer main	nly tran <mark>sfor</mark> ms	0,0	
	1) Current	2) Voltage	3) Frequency	4) Power
5.	What is the power	factor of a pure re	sistor circuit?	
	I) One	2) Zero	3) Leading	4) Lagging
6.	Functions of N.S.E	D.L. are related to-)	
	1) Bearer bonds	2) GDRs	3) Electronic sha	re 4) Debenture
7.	There are rings are	ound which of the	following planets?	
	1) Uranus	2) mars	3) Jupiter	4) Saturn
8.	is used to heat	the non-conductor	°S.	
	1) Eddy current he	ating	2) Arc heating	
	3) Induction heating	ıg	4) Dielectric hea	ting
9. What is the S.I. Unit of magnetic flux density?			x density?	
	I) Gauss	2) Tesla	3) Oersted	4) Weber

10.	Which type of oscillator is most stable in simple circuit?			
	1) Crystalline oscill	ator	2) Clapp oscillator	
	3) Colpitts oscillator		4) Armstrong oscil	lator
11.	Where is the headq	uarters of Geologica	al Survey of India loo	cated?
	I) Patna	2) Dehradun	3) Kolkata	4) Agra
12.	What is the proper	use of signal genera	tor?	
	1) Designing	2) Testing	3) Repairing	4) All the above
13.	Nasik is situated on	the bank of which	river?	
	a) Godavari	2) Narmada	3) Tapti	4) Shipra
14.	Who started the Sh	aka era?		
	I) Ashoka		2) Chandragupta-I	I
	3) Kanishka		4) Harsha	
15.	If one cylinder of a	diesel engine receiv		others. then for that
	cylinder the			
	I) exhaust till be sn	noky		0
	2) piston rings would stick into piston		grooves	
	3) scavenging occu	rs		1
	4) engine starts ove	rheating	0	
16.	The information is	sent by CW transmi	ticrb)	
	1) Changing the au-	dio frequency	2) Interrupting radi	o signal
	3) Using microphor		4) Using camera	
17.	Moisture can be rei	noved from lubricat	ing oil using	
	1) Tubular centrifug	gal	2) Clarifier	
	3) Sparkler filter		4) Vacuum leaf filt	er
18.	The rank of the fol	llowing matrix is-		
	0			
	0			
	1 0 J			
	1) 0	2) 1	3) 2	4) 3
19.	Germanium possess			
	1) Two valence elec		2) Three valence el	
	3) Four valence ele	ctrons	4) Five valence ele	ctrons

20.	Share of export from	India is the maxin	num to the following	g country-
	I) U.S.A.	2) U.K.	3) U.A.E.	4) Japan
21.	Which of the follow	ing is not a property	y of difference ampl	lifier?
	1) Capacitor is used	in it	2) It is used to con	npare two signals
	3) Difference amplif	ier yields more that	n the direct couple a	mplifier
	4) Frequency of diffe	erence amplifier rei	mains flat from zero	to high frequency
22.		of Ajanta located?		
	l) Orissa		2) Kerala	
	3) Maharashtra		4) Madhya Pradesh	ו
23.	Calorie value is the			
	_	2) Producer gas	3) Steam fiery gas	4) Oil gas
24.	The value of $\int \frac{x}{\cos^2 x}$	is equal to which	of the following?	
	1) x tan x		2) log cos x	
	3) $x \tan x + \log \cos \theta$		4) $x \tan x - \log \cos x$	s x
25.	The colonial system	of the company wa	as formalized by-	G
	[) Battle of Plassey		2) Battle of Buxar	4
	3) Battle of Panipat		4) Battle of Wandi	wash
26.	Natural rubber is pol	lyme <mark>r of-</mark>	7.46	
	1) Isobutane	2) Isoprene	3) Propane	4) lsopropene
27.	For generating large	currents on D.C. ge	enerators which wind	ding is generally pre-
	ferred?	100		
	1) Progressive wave	winding	2) Lap winding	
	3) Retrogressive way	ve winding	4) Current depends	on design
28.	A.C. servomotor is b	oasically a/ an		
	1) Universal motor	2) Single phase inc	duction motor	
	3) Two phase induct	ion motor	4) Three phase ind	uction motor
29.	co-efficient of veloc	ity as compared to	the coefficient of di	scharge is-
	1) Less		2) More	
	3) Equal		4) Less or more de	pending on flow

30.	The capacitance, in force current analogy, is analogous to-			
	1) Momentum	2) Velocity	3) Displacement	4) Mass
31.	signal will beco equal.	me zero when the	feedback signal and	reference signs are
	I) Input	2) Actuating	3) Feedback	4) Reference
32.	Most of the weather	phenomena take pl	lace in the-	
	1) Stratosphere	2) Troposphere	3) Tropopause	4) Ionosphere
33.	Motor-generator set	for D.C. are welding	ng has generator of-	
	1) Series type		2) Shunt type	
	3) Differentially cor	inpound type	4) Level compound	l type
34.	Which of the follow	ing motors is prefer	red when quick speed	d reversal is the main
	consideration?			
	1) Squirrel cage ind		2) Wound rotor ind	uction motor
	3) Synchronous mot		4) D.C.motor	4
35.			nade harder than other	ers-
	I) Ball	2) Outer-race		G
	3) Inner race	4) All are made eq	ually hard	GO.
36.	Selectivity of the rec	ceiver can be increa	sed by which of the	following?
	1) By using more tuned circuit 2) By decreasing number of tuned circuit 3) By using loudspeaker 4) By increasing gain of the receiver 7. An electronics circuits in which different components such as Diode. Resisted and Capacitor etc. are connected separately is called— 1) Chassis 2) Printed board			
	2) By decreasing nu	mber of tuned circu	dr /	
	3) By using loudspe	aker	CA'	
	4) By increasing gai	in of the receiver	0.	
37.	An electronics circu	uits in which differen	ent components such	as Diode. Resistor
	and Capacitor etc. a	re connected separa	tely is called-	
	1) Chassis	2) Printed board		
	3) Integrated circuit	4) Discrete circuit		
38.	Indicated power of a	a 4-stroke engine is	equal to-	
	I) pLAN	2) 2pLAN	3)	4) 4pLAN
	where p = Mean effective pressure. L = Stroke, A = Area of piston and N = rpm of engine			

39.	What are Ferrites?			
	I) Magnetic but have	ve low resistance	2) Magnetic but ha	ve high resistance
	3) Non magnetic w	ith low resistance	4) Non-magnetic v	with high resistance
40.	The translator programachine code line b		source code in high	level language into
	1) Assembler	2) Compiler	3) Loader	4) Interpreter
41.	National Library, th	ne largest in India is	located at-	
	I) Chennai	2) Mumbai	3) Delhi	4) Kolkata
42.	Pak Strait joins whi	ich of the following	two countries-	
	I) India-Pakistan	2) India-Myanmar	3) India-Sri lanka	4) None of these
43.	Who had appointed	the first Prime Min	ister of India?	
	I) Lord Mountbatte	en 🦱 🕈	2) C.Rajagopałacha	ari
	3) President of Indi		4) None of these	
44.			etween India and Pal	
	I) McMohan	2) Lord Durand	3) Radcliffe	4) None of these
45.		al efficiency of petro		-0.
	1) 20%	2) 30%	3) 50%	4) 75%
46.				
	I) NAND-Gate	2) OR-Gate	3) AND-Gate	4) NOT-Gate
47.	How will a red flow	ver ap <mark>pear,</mark> if it is se	en through a green g	lass?
	I) Red	2) Brown	3) White	4) Green
48.				
	I) Ampere	2) volt	3) Watt	4) Kilowatt-hour
49.	A diode	10		
	1) Functions only in			
	2) Functions in both	the directions		
	3) Does not functio	n at all		
	4) It gets damaged.	when voltage is app	olied	
50.	What is the frequen	cy of the receiver?		
	1) 488 kHz	2) 445 kHz	3) 455 kHz	4) 456 kHz
51.	When were the Indi	ian States organised	on the basis of lang	uage?
	1) 1947	2) 1950	3) 1956	4) 1952
			•	•

52.	What would be the expenditure in 30 days at the rate of 50 paise per unit, if a bulb of 100 W is used five hours per day?			
	1) Rs.10.50	2) Rs.8.50	3) Rs.7.50	4) Rs.9.50
53.	Lever functions on	which of the follow	ing principles?	
	1) Crank shaft	2) Joining rod	3) Crank pin	4) Cross head
54.	Protein is not availa	ble in which of the	following?	
	l) Meat	2) Milk	3) Rice	4) Pulse
55.	In steam turbine the	action of steam is-		
	I) Stable		2) Dynamic	
	3) Stable and dynan	nic	4) Neither stable no	or dynamic
56.	Among the following	ng statement which	is the false?	
	l) Only minority in	purities are added i	n a junction diode	
	2) Higher temperatu	ire increases the lea	kage current of diod	e
	3) A simple zener d	iode wor <mark>ks w</mark> hen co	nnected between an	ode to cathode
	4) Zener is mostly u	ised in v <mark>oltage reg</mark> u	lator	0
57.	In resistance heating	ng, highest working	temperature is ob	tained from heating
	elements made of			7
	I) Nickel and coppe	er	2) Nichrome	
	3) Silicon carbide		4) Silver	
58.	In higher pair, the re	elative motion is-	111/2	
	1) Purely turning		c.A.	
	3) Purely rotary		sliding and turning	
59.	The least populated	Stae in India is-		
	l) Goa		2) Sikkim	
	3) Manipur		4) Arunachal Prade	
60.	In case of gas turbin	nes, the gaseous fue	I consumption guara	ntees are based on-
	1) High heat value		2) Low heat value	
	3) Net calorific value	ie	4) Middle heat valu	ıe
61.	In a resistive load, p	ower dissipation w	ould be proportional	to-
	I) Current	2) ———— Current	3) (Current) ²	4) (Current ²)

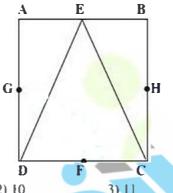
63	An automatic toaster is a loop control system.			
02.		er is a loop cond		
	I) Open		2) Closed	
	3) Partially closed		4) None of the abo	
63.			-	the collector current
	•	what is value of its		
	1) $\frac{10!}{100}$	2) 100	3) $\frac{1000}{10001}$	4) 10
64.	Who of the followi	_		
	1. V.V.Giri	2) B.D.Jatti	3) Hidayatullah	4) Zakir Hussain
65.	The northern most	limit of India is-		
	1) 36°4' N latitude		2) 37°8' N latitude	
	3) 37°6′ N latitude		4) 36°12' N latitud	e
66.	When the load is	above a s	ynchronous motor i	s found to be more
	economical.			
	1) 2 kW	2) 20 kW	3) 50 kW	4) 100 kW
67.	The first summit of NAM was held at-			
	l) Cairo	2) Lusaka	3) Belgrade	4) New Delhi
68. To convert moving coil galvanometer into an ammeter, which of the foll			ich of the following	
	methods is used?			
	l) Small resistance	in series	2) Small resistance	in parallel
	3) High resistance i	n series	4) High resistance	in parallel
69.	Following figure si	hows the curves of	efficiency versus co	ompression ratio for
	various cycles in 1.0	C. engines. For const	ant volume cycle, the	e curve applicable is-
	1			
	A P	-		0) 5
	Heriency A B B	C	1) A	2) B
	D		3) C	4) D
	Compressi	on ratio→		
70			5 14.53 1	111
/0.	value of x is equal		- X 4X- + 3X 1	will occur when the
	1) 0		3) 2	4) 2
		2) [4 3 7	4) 3

Which one of the natural regions is known as the 'Bread Basket' of the world?		
-	2) The mediterranean region	
	4) The equatorial region	
_		
	• •	
-	2) Common base	
•	4) None of these	
•		
-	3) Thyratron 4) Transistor	
•		
	2) Free holes	
	4) Holes minus electrons	
	4) Holes minus electrons2) Turning pair4) Sliding pair	
	2) Turning pair	
	4) Sliding pair	
	2) Few turns of thick wire	
	4) Many turns of thick wire	
	id due to the Chadri-Chadra incident was	
	2) Home rule movement	
	4) Civil disobedience movement	
	•	
•	2) Infinite	
3) High but within toleance	4) Low but not zero	
•		
•	ant	
2) Change occurs in carrier frequency		
3) Amplitude is varied according to the	instantaneous value of modulating wave	
4) None of these	_	
	1) The steppe region 3) The monsoon region When input signal in transistor amplifier out put is taken from emitter and collected. 1) Common emitter 3) Common collector Which of the following can be used to collected. 1) Thermistor 2) Thyristor The transient response of a system is made of the following can be used to collected. 1) Inertia forces 2) Internal forces Minority carrier in P-type semi-conduct 1) Free electrons 3) Holes and electrons both Pulley in a belt drive acts as- 1) Cylindrical pair 3) Rolling pair D.C. shunt relays are made of- 1) Few turns of thin wire 3) Many turns of thin wire The movement that came to an abrupt enthe- 1) Wahabi Movement 3) Non-cooperation movement While checked with a multimeter, an op 1) Zero 3) High but within toleance In amplitude modulation- 1) Amplitude of the carrier is kept const 2) Change occurs in carrier frequency 3) Amplitude is varied according to the	

81.	Oscillator operates on sub harmonic frequency because-			
	1) Lower frequency gives better stability			
	2) It gives linear out put			
	3) Less stages are used			
	4) More stages are used			
82.	Hopkinson's test on D.C. machines is co	onducted at-		
	i) No-load 2) part load	3) Full-load 4) Over load		
83.	Emitter follower is also called as-			
	1) Common emitter	2) Common base		
	3) Common collector	4) SCR		
84.	The example of lower pair is-			
	1) Shaft revolving in a bearing	2) Straight line motion mechanisms		
	3) Automobile steering gear	4) All of the above		
85.	Which is true statement among the follow			
	 Main function of the detector is to suppress the image signal Noise is very low in crystal detector Super-regenerative is less sensitive Diode detector is more sensitive 			
	4) Diode detector is more sensitive	1,40		
86.	The first governor-General of India und	der East India Company was-		
	1) Cornwallis	2) Wellesley		
	3) Warren Hastings	4) Sir John Shore		
87.	The expression $\int p \ dV$ can be used for c	btaining work of-		
	1) Non-flow reversible process	2) Steady flow reversible process		
	3) Adiabatic irreversible process	4) Throttling process		
88.	In connection with oscillator, which is I	FALSE statement?		
	1) Oscillator converts d.c. into a.c.			
	2) Oscillator is that amplifier which pro	ovides its own input		
	3) All types of oscillator produce sine v	vave		
	4) In phase, feedback used in oscillator is also called positive feedback.			

89.	The index of compression n tends to reach ratio of specific heats γ when-		
	1) flow is uniform and steady		
	2) process is isentropic		
	3) process is isothermal		
	4) process is isentropic and specific hea	t does not change with temperature	
90.	Who of the following attended all the the	nree Round Table Conferences?	
	l) B.R. Ambedkar	2) M.M.Malaviya	
	3) Vallabhbhai Patel	4) None of the above	
91.	For which of the following substances,	the internal energy and enthalpy are the	
	functions of temperature only-		
	I) Any gas	2) Saturated steam	
	3) Water	4) Perfect gas	
92.	Frequency multiplier stage of the transi	mitter operates under-	
	l) Class C 2) Class A	3) Class AB 4) Class B	
93.	Which of the following is used in the b	last furnace as flux?	
	1) Fluorspar	2) Quartzite	
	3) Limestone	4) Ferro-manganese	
94.	An air vessel is usually provided at the	summit of a syphon in order to-	
	1) Regulate the flow	2) Increase discharge	
	3) Avoid interruption in flow	4) Increase velocity	
95.	An exciter for a turbo generator is a-		
	1) Separately excited generator	2) Shunt generator	
	3) Series generator	4) Compound generator	
96.	Which of the following instruments is a	nost accurate?	
	1) Vertical caliper	2) Manometric screw gauge	
	3) Optical projector	4) Mechanical comparator	
97.	The value of $\underset{x \iff}{\text{Lt}} \frac{\sin x}{x}$ is equal to-		
	1) 1 2) -1	3) Zero 4) Infinity	

98. In the given figure we see a square ABCD and a triangle EDC within it. E, F. G and H are the midpoints of the four sides of the square AB, DC, AD and BC respectively. If these midpoints are joined together with straight lines e.g., E with F and G with H, then how many triangles will the figure have?



1)9

- 2) 10
- 3) 11
- 4) 12

99. Two generators A and B have 6-poles each. Generator A has wave wound armature while generator B has lap wound armature. The ratio of the induced e.m.f. in generator A and B will be

- 1)2:3
- 2) 3:1
- 3) 3:2

100. A frame-structure is nice if the number of its constituents is equal to EDUCATING EDUCATING

- 1) 2n-3
- 2) n-1