A.V. E	ducation	Society's
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Degloor College, Degloor (114)

FACULTY OF SCIENCE

Examination Summer-2020

		Examination Sun	imer-2	.020		
Class	s: B.S	c. S.Y.		Semester : IV		
Nam	e of S	ubject: Physics	Time :1 Hour			
Pape	r Titl	e and NO.: <i>Basic Electronics</i> ((IX)	Max. Marks: 40		
<i>N.B</i> .	i)	Attempt all questions				
	ii)	All question carry equal mari	ks			
	iii)	Use OMR answer sheet				
1.	Zene	er diode utilises charact	eristics	for voltage regulation.		
	A)	Reverse	B)	Forward		
	C)	Both forward and reverse	D)	None of the above		
2.		In an unregulated power supply, if a.c. input voltage increases, then the putput voltage				
	A)	Decreases	B)	Increases		
	C)	Remains constant	D)	None of the above		
3.	Zene	er diode can be used as				
	A)	DC voltage regulator only		B) AC voltage regulator only		
	C)	Both DC and AC voltage reg	ulator	D) None of the above		
4.	Perc	entage voltage regulation is				
	A)	$\frac{V_{NL} - V_{FL} \times 100}{V_{FL}}$	B)	$rac{V_{NL}}{V_{FL}} imes 100$		
	C)	$\frac{V_{FL}}{V_{NL}} \times 100$	D)	$\frac{V_{NL} + V_{FL} \times 100}{V_{FL}}$		

5.	Zene	er diode is used as a vo	oltage	regulating device.
	A)	series	B)	shunt
	C)	Series-shunt	D)	None of the these
6.	In Z	ener voltage regulator, change in	load c	current produce changes in
	A)	Zener current	B)	Zener voltage
	C)	Both Zener voltage and current	tD)	None of the above
7.	Zene	er diode are generally made up of	-	
	A)	Germanium	B)	Carbon
	C)	iron	D)	Silicon
8.	Whi	ch of these is the best description	for Z	ener diode
	A)	It is diode	B)	It is constant current device
	C)	It is constant voltage device	D)	It works in forward bias only
9.	A re	gulated DC power supply contair	18	
	A)	Rectifier circuit only	B)	Filter circuit only
	C)	Zener diode only	D)	All of the above
10.	The	load voltage is approximately con	nstant	when a Zener diode is
	A)	Forward biased	B)	Unbiased
	C)	Reverse biased	DO	perating in breakdown region
11.	Nun	ber of depletion regions in a tran	isistor	is/are
	A)	Four	B)	Three
	C)	One	D)	Two
12.	The	base of the transistor is		
	A)	Heavily doped	B)	Moderately doped
	C)	Lightly doped	D)	None of the above
13.	The	most commonly used transistor a	irrange	ement is
	A)	Common emitter arrangement	B)	Common base arrangement
	C)	Common collector arrangemen	tD)	None of these

14.	As t	emperature of transistor increase	es, the	base emitter resistance		
	A)	Decreases	B)	Increases		
	C)	Remains same	D)	None of the above		
15.	In n	<i>ppn</i> transistor Are the m	inority	carriers		
	A)	Doner ions	B)	Holes		
	C)	Free electrons	D)	Accepter ions		
16.	In a	transistor				
	A)	$I_E = I_C - I_B$		$B) \qquad I_C = I_E + I_B$		
	C)	$I_B = I_E + I_C$	D)	$I_E = I_C + I_B$		
17.	The	re are h parameters of tra	ansisto	r		
	A)	Five	B)	Two		
	C)	Four	D)	Three		
18.	Dim	nensions of h parameter are				
	A)	Ohm	B)	mho		
	C)	farad	D)	ampere		
19.	Trar	sistor biasing represents	.condit	ions		
	A)	DC	B)	AC		
	C)	Both AC and DC	D)	None of the above		
20.	Trar	sistor biasing is done to keep		In the circuit		
	A)	Proper direct current	B)	Proper alternating current		
	C)	The base current small	D)	Collector current small		
21.	In O	P-AMP common mode gain is				
	A)	Very high	B)	Very low		
	C)	Always unity	D)	Unpredictable		
22.	Curi	cent can not flow to ground throu	ıgh			
	A)	A mechanical ground	B)	An AC ground		
	C)	An ordinary ground	D)	A virtual ground		

23.	Common mode rejection ratio (CMRR) is					
	A)	<u>А_{СМ}</u> А _{DM}) B)	$\frac{A_{DM}}{A_{CM}}$		
	C)	$\frac{A_{CM+A_{DM}}}{A_{DM}}$	D)	$\frac{A_{CM-A_{DM}}}{A_{DM}}$		
24.	The	differential gain is				
	A)	Very high	B)	Very low		
	C)	Depends upon input voltage	D)	About 100		
25.	For	an OP-AMP with negative feedb	oack, tł	ne output is		
	A)	Equal to input	B)	Increased		
	C)	Feed back to inverting input	D) F	Fed back to noninverting input		
26.	An (OP-AMP can amplify				
	A)	DC signals only	B)	AC signals only		
	C)	Both AC and DC signals	D)	Neither DC nor AC signals		
27.	Slew	v rate is maximum rate of change	e of			
	A)	Input current	B)	Output current		
	C)	Input voltage	D)	Output Voltage		
28.	Slew	v rate is measured in				
	A)	Volts/microsecond	B)	Ampere/ micro second		
	C)	Micro-second/ volts	D)	Micro second/Ampere		
29.	If A	$_{DM}$ =3500 and A_{CM} =0.35 then Cl	MRR i	S		
	A)	1225	B)	10,000		
	C)	0.0001	D)	None of the these		
30.	Whi	ch of the following is/are proper	ties of	OP-AMP		
	A)	High input impedance	B) L	arge open loop voltage gain		
	C)	Large CMRR	D)	All of these		
31.	And	oscillator converts				
	A)	AC power into DC power	B)	DC power into AC power		
	C)	Mechanical power to AC	D)	AC to Mechanical power		

32.	In a	n LC transistor oscillator, active	e device	is
	A)	Transistor	B)	Biasing circuit
	C)	LC tank circuit	D)	All of these
33.	An o	oscillator employs Feedba	ack	
	A)	Negative	B)	Positive
	C)N	either Positive nor negative	D)	Both positive and negative
34.	An o	oscillator produces osci	llations	
	A)	Modulated	B)	damped
	C)	Undamped	D)	None of these
35.	In pl	hase shift oscillator, frequency	determi	ning elements are
	A)	L and C	B)	R, L and C
	C)	R and C	D)	None of these
36.	Hart	ely oscillator is commonly used	l in	
	A)	Radio transmitters	B)	TV receivers
	C)	Radio receiver	D)	TV transmitter
37.	In L	C oscillators, the frequency of o	oscillati	on is
	A)	$\frac{2\pi L}{\sqrt{LC}}$	B)	$\frac{2\pi}{\sqrt{LC}}$
	C)	$\frac{\sqrt{LC}}{2\pi}$	D)	$\frac{1}{2\pi\sqrt{LC}}$
38.	In a	certain oscillator A _v =50.The at	tenuatio	on of feedback circuit must be
	A)	1	B)	0.01
	C)	10	D)	0.02
39.	In pl	hase shift oscillator we use	RC se	ections
	A)	Three	B)	Two
	C)	Four	D)	None of these
40.	In C	olpits oscillator, feedback is ob	tained b	у
	A)	Tickler coil	B)	Magnetic induction
	C)	Centre of split capacitor	D)	None of these

ANSWER KEYS

MCQ QUESTION PAPER SET CLASS: B.Sc. SI

SUBJECT: PHYSICS SEM -IV MAX.MARKS:40 TITLE: BASIC ELECTRONICS

CLASS: B.Sc. SECOND YEAR PAPER-IX TIME DURATION:1 HR.

Q.NO.	ANS.	Q.NO.	ANS.	Q.NO.	ANS.	Q.NO.	ANS.
1	A	11	D	21	В	31	В
2	B	12	С	22	D	32	Α
3	С	13	Α	23	В	33	В
4	A	14	Α	24	Α	34	С
5	B	15	С	25	С	35	С
6	A	16	D	26	С	36	С
7	D	17	С	27	D	37	D
8	С	18	A	28	Α	38	D
9	D	19	A	29	В	39	Α
10	D	20	Α	30	D	40	С

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