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F	Registration I	No :					
Total Nu	Imber of Pag	es : 02					3.Tech E2101
		2 nd S	emester Back	Examination	2018-19	130	
	210	210	BASICS OF	ELECTRONIC	S ²¹⁰	210	21
	ECE,	, EEE, ELECT		FAT, IT, MEC arks : 100	H, MINERAL, N	lining	
				: 3 Hours			
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Answe	r Question No	o.1 (Part-1) w	_		GHT from Par	t-II and any TWO	from
	210	210 The figures	- · •	art-III. 210 and margin i	210 ndicate marks.	210	21
		ine ngures					
				art- I			
Q1			Questions (Ans	,	6		2 x 10)
a)		u mean by freqi idal signal. f(t)=		? Calculate the	frequency and ti	ne period of the	
b)			an ideal Op-Am	p.			
c)			nal runaway of a		210	210	2
d) e)			f negative feedb mention its value		rectifier		
f)			ur NAND gates.		recuiler.		
g)	,	, -	valent binary nu	mber.			
h)		,10	athode Ray Osc				
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i)	•			utput characteri	stics?		
i) j)	•		r diode and recti		210 210	210	2
j)	Differentiate	between Zener	r diode and recti 210 P	fying diode. 210 Part- II	210		
j) Q2	Differentiate 210 Only Focuse	between Zener 210 ed-Short Ansv	r diode and recti ²¹⁰ P ver Type Quest	fying diode. ²¹⁰ Part- II ions- (Answer	210 Any Eight out o	of Twelve)	2 (6 x 8)
j)	Differentiate 210 Only Focuse A crystal dio	between Zener 210 ed-Short Ansv de having an ir	r diode and recti 210 P ver Type Quest nternal resistanc	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is	210 Any Eight out out out out out out out out out ou	of Twelve) ave rectification.	
j) Q2	Differentiate 210 Only Focuse A crystal dio If the applied	between Zener 210 ed-Short Ansv de having an ir	r diode and recti 210 P ver Type Quest nternal resistanc	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is	210 Any Eight out o	of Twelve) ave rectification.	
j) Q2	Differentiate 210 Only Focuse A crystal dio If the applied following :	ed-Short Ansv de having an ir d voltage is V =	r diode and recti 210 F ver Type Quest nternal resistanc = 50 sin 2t and th	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is	210 Any Eight out out out out out out out out out ou	of Twelve) ave rectification.	
j) Q2	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I	between Zener 210 ed-Short Answ de having an ir d voltage is $V =$ I_{rms} of the outp	r diode and recti 210 F ver Type Quest nternal resistanc = 50 sin 2t and th ut	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is	210 Any Eight out out out out out out out out out ou	of Twelve) ave rectification.	(6 x 8)
j) Q2	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ii. AC powe	between Zener 210 ed-Short Answ de having an ir d voltage is $V =$ I_{rms} of the outp er input and po	r diode and recti 210 F ver Type Quest nternal resistanc = 50 sin 2t and th ut	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is he load resistan	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$	of Twelve) ave rectification. 2, determine the	(6 x 8)
j) Q2	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ²¹ ii. AC powe iii. Ripple fa Explain how	between Zener 210 ed-Short Answ de having an ir d voltage is $V =$ I_{rms} of the outp er input and po actor Op-Amp can b	r diode and recti 210 P ver Type Quest nternal resistance = $50 \sin 2t$ and the ut wer output e used as a sum	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr	of Twelve) ave rectification. 2, determine the 210 am.	(6 x 8)
j) Q2 a)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ²¹ ii. AC powe iii. Ripple fa Explain how Draw the circ	between Zener 210 ed-Short Answer de having an ir d voltage is $V =$ I_{rms} of the output er input and po actor Op-Amp can b cuit diagram of	r diode and recti 210 P ver Type Quest nternal resistance = $50 \sin 2t$ and the ut wer output e used as a sum	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$	of Twelve) ave rectification. 2, determine the 210 am.	(6 x 8)
j) Q2 a) b) c)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ²¹ ii. AC powe iii. Ripple fa Explain how Draw the circ output chara	between Zener 210 ed-Short Answer de having an ir d voltage is $V =$ I_{rms} of the output er input and pote actor Op-Amp can b cuit diagram of cteristics.	r diode and recti 210 P ver Type Quest internal resistance = $50 \sin 2t$ and the ut wer output e used as a sum a common base	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 particular and the second	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr r configuration w	of Twelve) ave rectification. 2, determine the 210 am. vith its input and	(6 x 8)
j) Q2 a) b)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ²¹⁰ ii. AC powe iii. Ripple fa Explain how Draw the circ output chara Why biasing	between Zener 210 ed-Short Answ de having an ir d voltage is $V =$ I_{rms} of the outp er input and po actor Op-Amp can b cuit diagram of cteristics. circuits are req	r diode and recti 210 P ver Type Quest nternal resistance = $50 \sin 2t$ and the ut wer output e used as a sum a common base puired for a trans	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 210 mming amplifier e PNP transistont sistor? Discuss of	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr	of Twelve) ave rectification. 2, determine the 210 am. with its input and rechniques.	(6 x 8)
j) Q2 a) b) c) d) e)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, R ²¹ ii. AC powe iii. Ripple fa Explain how Draw the circ output chara Why biasing What is a d amplifier with	between Zener 210 ed-Short Answ de having an ir d voltage is $V =$ I_{rms} of the outp er input and po actor Op-Amp can b cuit diagram of cteristics. circuits are req lifferential amp n a neat sketch	r diode and recti 210 P ver Type Quest internal resistance = $50 \sin 2t$ and the ut wer output e used as a sum a common bases juired for a trans	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier ie PNP transistont sistor? Discuss of in output voltage	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr r configuration was different biasing to e expression for	of Twelve) ave rectification. 2, determine the 210 am. vith its input and rechniques.	(6 x 8) 2
j) Q2 a) b) c) d)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ²¹ ii. AC powe iii. Ripple fa Explain how Draw the circ output chara Why biasing What is a d amplifier with Which logical	between Zener 210 ed-Short Answer de having an ir d voltage is $V =$ I_{rms} of the output er input and potential actor Op-Amp can be cuit diagram of cteristics. circuits are required ifferential amput n a neat sketch al gates are cor	r diode and recti 210 P ver Type Quest internal resistance = $50 \sin 2t$ and the ut wer output e used as a sum a common base puired for a trans lifier? Derive ar insidered as univ	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier e PNP transistont sistor? Discuss of n output voltage ersal gates? Di	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr r configuration w different biasing t	of Twelve) ave rectification. 2, determine the 210 am. vith its input and rechniques.	(6 x 8) 2
j) Q2 a) b) c) d) e)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ²¹ ii. AC powe iii. Ripple fa Explain how Draw the circ output chara Why biasing What is a d amplifier with Which logicat the universal	between Zener 210 ed-Short Answer de having an ir d voltage is $V =$ I_{rms} of the output er input and potential op-Amp can bout diagram of cteristics. circuits are required inferential ampunates are cor a gates are cor l properties of a	r diode and recti 210 P ver Type Quest internal resistance = $50 \sin 2t$ and the ut wer output e used as a sum a common base lifier? Derive ar insidered as universa	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier e PNP transisto sistor? Discuss of n output voltag versal gates? Dr al gate.	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr r configuration was different biasing to e expression for	of Twelve) ave rectification. 2, determine the 210 am. with its input and rechniques. The differential agrams showing	(6 x 8) 2
j) Q2 a) b) c) d) e) f) g)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, R ²¹ ii. AC powe iii. Ripple fa Explain how Draw the cirro output chara Why biasing What is a d amplifier with Which logica the universal What is a cli sketch and s	between Zener 210 ed-Short Answ de having an ir d voltage is $V =$ I_{rms} of the outp er input and po actor Op-Amp can b cuit diagram of cteristics. circuits are req lifferential amp n a neat sketch al gates are cor l properties of a pper circuit? D	r diode and recti 210 P ver Type Quest internal resistance = $50 \sin 2t$ and the ut wer output e used as a sum a common base lifier? Derive ar isidered as universation any one universation iscuss briefly on ns.	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier e PNP transistont sistor? Discuss of n output voltag rersal gates? Dra al gate. n positive and n	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr r configuration w different biasing to e expression for raw the circuit dia	of Twelve) ave rectification. 2, determine the 210 am. with its input and rechniques. The differential agrams showing	(6 x 8) 2
j) Q2 a) b) c) d) e) f) g) h)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, R ²¹ ii. AC powe iii. Ripple fa Explain how Draw the cirro output chara Why biasing What is a d amplifier with Which logicat the universal What is a cli sketch and s Draw a circu	between Zener 210 ed-Short Answ de having an ir d voltage is $V =$ I_{rms} of the outp er input and po actor Op-Amp can b cuit diagram of cteristics. circuits are req lifferential amp n a neat sketch al gates are cor l properties of a pper circuit? D ome application it to explain abo	r diode and recti 210 P ver Type Quest aternal resistance = 50 sin 2t and the ut wer output e used as a sum a common base juired for a trans lifier? Derive ar bidered as universation any one universation iscuss briefly on ns. out R-C phase s	fying diode. Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier e PNP transistont sistor? Discuss of n output voltage ersal gates? Dra al gate. n positive and n hift Oscillator.	210 Any Eight out o used for a full wa ce is $R_L = 800\Omega$ 210 with a neat diagr r configuration w different biasing to e expression for raw the circuit dia egative clippers of	of Twelve) ave rectification. 2, determine the 210 am. with its input and rechniques. The differential agrams showing	(6 x 8) 2
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j) Q2 a) b) c) d) e) f) g) h) i) j)	Differentiate 210 Only Focuse A crystal dio If the applied following : i. I_m, I_{dc}, I ²¹ ii. AC powe iii. Ripple fa Explain how Draw the circ output chara Why biasing What is a d amplifier with Which logicat the universal What is a cli sketch and s Draw a circu State and ex How the tran diagrams.	between Zener 210 ed-Short Answer de having an ir d voltage is $V =$ I_{rms} of the output er input and po- actor Op-Amp can b cuit diagram of cteristics. circuits are require inferential ampunation a neat sketch al gates are cor l properties of a pper circuit? D come application it to explain about plain the function sistor can be	r diode and recti 210 P ver Type Quest Internal resistance = 50 sin 2t and the ut wer output e used as a sum a common base lifier? Derive ar iscuss briefly on ns. out R-C phase so on of a sweep g used as an am	fying diode. 210 Part- II ions- (Answer ie $r_f = 20\Omega$ is the load resistant 210 mming amplifier e PNP transistont sistor? Discuss of n output voltag ersal gates? Dra al gate. n positive and n hift Oscillator. enerator in an of plifier in CE co	210 Any Eight out o used for a full war ce is $R_L = 800\Omega$ 210 with a neat diagr r configuration war different biasing for raw the circuit dia egative clippers war bscilloscope. nfiguration? Exp	of Twelve) ave rectification. 2, determine the 210 am. with its input and rechniques. The differential agrams showing with appropriate	(6 x 8) 2
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210		210	210	210	210	210	210	210	
	Q3	Part-III Only Long Answer Type Questions (Answer Any Two out of Four) Explain how you can use to measure voltage, current, frequency and time period of a sinusoidal wave in CRO. Also write the principle and working of a CRO with a proper block diagram.							
210	Q4	²¹⁰ Define the terms Input offset voltage, input bias current, CMRR, Slew Rate of an Op-Amp. Define Multiplexing and Demultiplexing. Implement a full adder circuit using two 4:1 multiplexers.							
	Q5								
	Q6		circuit of an em e and the voltag	iitter follower. De e gain.	rive the expressi	ion for input imp	edance, output	(16)	
210		210	210	210	210	210	210	210	
210		210	210	210	210	210	210	210	
210		210	210	210	210	210	210	210	
210		210	210	210	210	210	210	210	
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