Name... Reg. N

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE **EXAMINATION, JUNE 2010**

EC 04 405—ELECTRONIC CIRCUIT

(2004 Admissions)

Time: Three Hours Maximum: 100 Marks

Answer all questions.

Part A

- I. (a) Explain how does one define small signals.
 - (b) Define slew rate and explain its significance.
 - (c) Explain how low pass RC circuit is used as an integrator.
 - (d) Explain about hysteresis curve.
 - (e) What is monostable multivibrator? Explain.
 - Explain the principles of boot strap circuits.
 - Explain cross-over distortion and method of eliminating it.
 - (h) Explain about cascade amplifier.

 $(8 \times 5 = 40 \text{ marks})$

Part B

II. (a) Draw the circuit diagram of dual input, balanced output differential amplifier and explain differential mode operation. Derive expression for differential mode gain.

(b) (i) Obtain the small signal model for low frequency of BJT differential amplifier.

(8 marks)

(ii) List the non-ideal characteristics of the differential amplifier.

(7 marks)

III. (a) Draw the circuit diagram of fixed biased transistorized bistable multivibrator and explain its operation.

- (b) With neat circuit diagram explain the operation of pulse transformer.
- IV. (a) Draw the circuit diagram of emitter coupled astable multivibrator and explain its operation with neat waveforms.

(b) Draw the circuit diagram of a transistorized sweep circuit and explain its operation.

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	(Pages 2) NameL.W.	
V. (a) (i)	Explain the basic class-D amplifier using complementary symmetry switches diagram.	with neat
Ñ ÇÄ.	FOURTH SEMESTER B.TECH. (ENGINEERING) DECRES	(7 marks)
(ii)	Show that the maximum efficiency of a class-B amplifier is 78.5%.	(8 marks)
A PARTIES OF THE PROPERTY OF THE PARTIES OF THE PAR	EC 04 405—ELECTRONC CIRCUIT—II	
(b) (i)	Explain what is meant by harmonic distortion.	(7 marks)
(ii)	Explain the five point method of calculating the higher order harmonic distort	ion.
		(8 marks)
	$[4 \times 15 =$	60 marks]
	Explain how does one define small signals.	
	Define slew rate and explain its significance.	
	Explain how low pass HC circuit is used as an integrator.	
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	Explain about hysteresis curve.	
	What is monostable multivibrator? Explain.	
	Explain the principles of boot strap circuits.	
	Explain cross-over distortion and method of sliminating it.	
	Explain about cascade amplifier.	(d)
= 40 marks)	하는 그는 그리는 이 그는 것이 들어 있었다. 그리고 하는 것이 되었다. 그리고 하는 것이 없는 것이 되었다.	
	Part B	
and explain	Draw the circuit diagram of dual input, balanced output differential amplifier	
	differential mode operation. Derive expression for differential mode gain.	
	 Obtain the small signal model for low frequency of BJT differential amplifier) (d)
(7 marks)	i) List the non-ideal characteristics of the differential amplifier.	
	Draw the circuit diagram of fixed biased transistorized bistable multivibrator an	
	operation. Or	
	With nest circuit diagram explain the operation of pulse transformer.	
its operation	Draw the circuit diagram of emitter coupled astable multivibrator and explain i with neat waveforms.	

(b) Draw the circuit diagram of a transistorized sweep circuit and explain its operation.

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