

AB-3188]

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Third Year B. Sc. (Sem. V) Examination March/April – 2015

Electronics: Paper - X

(Measurement Systems & Industrial Instrumentation)

Time	:	Hours]	[Total Marks : 5	50	
Insti	ructi	ions :			
(1)					
Fillu Nan	up stric	. → નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. htly the details of → signs on your answer book. e Examination : Year B. Sc. (Sem. V)	seat No.:		
_		e Subject :	,	1	
		ronics : Paper - X			
Sub	ject Co	ode No.: 3 1 8 8 ← Section No. (1, 2,): NiI	Student's Signature		
(2)	<u>() 1</u>	is compulsory.			
` ′	Figures at extreme right indicate full marks.				
(0)	rigu	iles at extreme fight indicate fun marks	•		
1	Ans	wer in brief :		8	
•	(a)	What is loading effect?			
	(a) (b)	What is steady state error?			
	(c)	State first order measurement systems			
	(d)	Name the output devices (data presentati	on alament) in		
	(u)	- · · · · · · · · - · · · · · · · · · ·	on element) in		
		measurement systems.			
2	(a)	Explain the electromagnetic flow meter	along with its	7	
	a >	merits and demerits.		_	
	(b)	Explain the ultrasonic flow measuremen	it along with	7	
		its merits and demerits.			
		OR			
	(a)	What is operation transfer function? W	hat are its	8	
	. ,	advantages? Find operational transfer f			
		case of zero order, first order and secon			
		measurement systems.			
	(b)	Discuss, in detail, the electrical method to	measure	6	
	(·-)	pressure.		-	

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3	(a)	Discuss the step and ramp response of first order	8
		measurement systems.	
	(b)	Discuss the high gain feed-back for correcting the	6
		interfering inputs.	
		\mathbf{OR}	
3	(a)	Define the second order measurement systems and	8
		discuss any two cases in detail.	
	(b)	Discus the method of signal filtering to remove the	6
		interfering inputs.	
4	Wri	te short notes : (any two)	14
	(a)	LVDT	
	(b)	C-type Boardon tube	
	(c)	Operational transfer function	
	(d)	Frequency response of first order system.	

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