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EX-604(N)**B. E. (Sixth Semester) EXAMINATION, June, 2011****(Electrical and Electronics Engg. Branch)****ELECTRONICS INSTRUMENTATION****[EX-604(N)]***Time : Three Hours**Maximum Marks : 100**Minimum Pass Marks : 35***Note :** Attempt all questions. All questions carry equal marks.

1. (a) What are the application and advantages of general CRO and DSO ? 10
 - (b) Explain how will you generate Lissajous patterns using CRO. 10
- Or*
- (a) Explain Dual beam and sampling CRO. 10
 - (b) Discuss the following : 10
 - (i) Vertical and horizontal deflection system
 - (ii) Postdeflection acceleration
2. (a) Explain Maxwell's inductance capacitance bridge with analysis and phasor diagram. 10
 - (b) Describe Schering and Hays bridge. 10

P. T. O.

- (a) Discuss Q-meter and its applications with suitable example. 10
 - (b) Explain Anderson's and universal bridge. 10
3. (a) What is transducer ? Explain LVDT in details. 10
 - (b) Explain analog and digital data acquisition system. 10
- Or*
- (a) Write about Piezoelectric and Optoelectronic transducer. 10
 - (b) Explain RVDT and strain gauge with neat sketch. 10
4. (a) What is the importance of the signal generator in research ? Explain random noise generator with application. 10
 - (b) Describe AF sine and square wave generator with suitable diagram and working. 10
- Or*
- (a) Explain spectrum analyzer and digital Fourier analyzer. 10
 - (b) What is basis principle of wave analyzer ? Explain with diagram. 10
5. (a) Define the following terms : 10

(i) Resolution	(ii) Sensitivity
(iii) Accuracy	(iv) Noise
(v) Q-factor	
 - (b) Explain digital display system like CRT and LCD. 10
- Or*
- (a) Discuss analog recorder and RS232C. 10
 - (b) What is the difference between analog voltmeter and digital voltmeter ? Explain working principle of digital voltmeter with proper diagram. 10