

# FORM 4

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

OMB APPROVAL	
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## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person <b>Kirloskar Virendra A</b>			2. Issuer Name and Ticker or Trading Symbol <b>KLA TENCOR CORP [KLAC]</b>			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) <b>SVP &amp; Chief Accounting Officer</b>		
(Last) (First) (Middle) <b>C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE</b>			3. Date of Earliest Transaction (Month/Day/Year) <b>05/05/2011</b>					
(Street) <b>MILPITAS, CA 95035</b>			4. If Amendment, Date Original Filed(Month/Day/Year)			6. Individual or Joint/Group Filing(Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person		
(City) (State) (Zip)			<b>Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned</b>					

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	05/05/2011		M		867	A	\$ 39.89	8,106	D	
Common Stock	05/05/2011		S <sup>(1)</sup>		3,399	D	\$ 45	4,707	D	
Common Stock - Restricted Stock Units <sup>(2)</sup>								38,150 <sup>(3)</sup>	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1474 (9-02)

**Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.**

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V		Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Non-Qualified Stock Option (Right to Buy)	\$ 39.89	05/05/2011		M		867	<sup>(4)</sup> 09/16/2014	Common Stock	867	\$ 0	0	D		

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Kirloskar Virendra A C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035			SVP & Chief Accounting Officer	

