ELECTRICAL ENGINEERING DEPARTMENT
DELHI TECHNOLOGICAL UNIVERSITY
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110042

No. F. DTU/EED/16/2/CS/2024   Dt 5/12/24

NOTICE INVITING QUOTATIONS

Sealed Quotations are invited for the supply of following items in Electrical Engineering Department. The sealed quotations on company's letter head including GSTIN no. should reach to the office of the Head, Department of Electrical Engineering, Delhi Technological University, Delhi-110042 latest by **31.12.2024** by the post or on the e-mail Id:**hodee@dce.ac.in**

S.NO	ITEM NAME	SPECIFICATIONS	QTY
1	AC Servo Motor	**Should be capable to study experiments:** •Inertia and friction parameters •Time constant •Transfer function Systems should be complete with: • 2-phase a.c. servomotor - 12V/0.65A, 1800 rpm, 50Hz per phase •Small generator for loading •4-digit speed display •3-digit time constant display •3½ digit r.m.s. voltmeter •3½ digit d.c. panel meter • Separate unit for motor in a see-through cabinet with single perspex cover for view from all three sides •Voltage regulated internal supplies •Detailed literature with sample results	02
2	D.C. Speed Control	**Should be capable to study experiments:** •Effect of loading on the speed of the motor in the open loop • Steady state error variation with forward gain • Effect of I-control on the steady state error • System time constant variation with forward gain • Effect of forward gain on disturbance rejection • Determination of the motor transfer function and tachometer characteristics • Controller design in the MATLAB environment **Systems should be complete with:** • Speed control of a 12V, 4W permanent magnet d.c. motor • Speed range: 0 to 3000 rpm (typical) • Opto-interrupter based speed sensing • 4-digit speed display in rpm • MATLAB interface provided • Electronic tachogenerator for feedback • Separate unit for motor in a see-through cabinet • Smooth, non-contact eddy current brake for loading •Built-in 3½ digit DVM for signal measurements • Built-in IC regulated internal power supply • 220V±10%, 50Hz mains operation • Supporting literature and patch cords included • Excluding TECH-CAMM (Data Acquisition Unit) which will be required to establish MATLAB connection and is an optional attachment available with this system. • Excluding CRO	02

3	Linear System Simulator	**Should be capable to study experiments:** •Open loop step response of First Order type-0 system for various values of gain •Closed loop step response of First Order type-0 system for various values of gain •Open loop step response of Second Order type-0 and type-1 systems • Closed loop step response of Second Order type-0 and type-1systems • Steady-State errors for closed loop configuration through triangular wave input • Response of third order system Suitable for Frequency Response studies with external function generator (Function Generator not included with the system) **Systems should be complete with:** • Simulated first, second and third order system of type-0 and type-1 (4 combinations) • Calibrated variable gain amplifier (Resolution 1 : 1000) • Built-in signal sources: Square wave and Triangular Frequency : 45-90Hz; Amplitude: 0-2.5V approximately •Trigger output for perfectly steady display on CRO • Uncommitted amplifier for phase adjustment • Provision for disturbance inputs • 220V±10%, 50Hz mains operation • Excluding CRO	02
4	Magnetic Levitation	**Should be capable to study experiments:** •To develop the transfer function of the system through laboratory •To design/implement PD and lead compensation with different parameter •To simulate the system in MATLAB and study in detail various control option and their response **Systems should be complete with:** • Object suspended in air by magnetic force • Controller design to maintain stability • Position changing by reference • Built-in power supplies, meters etc • 220V/50Hz operation • Detailed technical literature included	01

(Prof. Rachna Garg) 5/12/24

Head,

Department of Electrical Engineering

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1. Sr. Account Officer
2. HOD (CC) to upload on DTU website
3. Notice board, EED.