

DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY,  
SHIBPUR, HOWRAH-711 103.

*No. 254/2022/EE-3/21(KM-M/C)*

Dated: 23/03/2022

*From :* The Head of the Department,  
Electrical Engineering,  
IEST, Shibpur, Howrah-711 103

*To :* Enlisted vendors of the institute and other interested parties/ For Website Tender.

Dear Sir(s),

Sealed techno-commercial quotations mentioning technical specifications, validity, delivery date, price, warranty etc. are invited for supply of the following item(s) within 9 days from the date of publication of this notice in the institute website. The quotation should include 5% GST only as per institute rule, delivery charges, entry tax if any, etc. and should be addressed to the Head, Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur and should mention a firm delivery period. Preferences will be given to the suppliers who can supply ex-stock.

Any clarifications regarding specifications only may be obtained sending an e-mail with tender reference to [kmukherjee.ee@faculty.iests.ac.in](mailto:kmukherjee.ee@faculty.iests.ac.in) within 5 days after publication of the tender advertisement in the institute website.

The vendors, who are not enlisted in the Institute register, should submit the copies of their valid Trade License, PAN, latest Income Tax / Sales Tax Statement /Return, SSI/MSME certificate, GST certificate, if any etc. and any other commercial credentials. The institute shall provide the certificate for concessional GST rate (5%) along with the purchase order.



*Yours faithfully,*

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Signature of the indenting Officer/  
Concerned Faculty Member

Prof. & Head of EE Dept.  
IEST, Shibpur, Howrah – 711 103

Purchase of various instruments for Electrical Machines laboratory, EE Dept., IEST Shibpur:

**Item 1:** Analog indicating meters (Automatic Electric make/equivalent reputed make), 1 lot, as per following specifications:

The analog indicating meters will be used indoor inside a laboratory in horizontal position for continuous use and should be PORTABLE and as follows:

- (a) Multirange Permanent Magnet Moving Coil Ammeters (Table-top model, 250 mm x 190 mm x 80 mm approximate size, black engineering plastic housing, scale length 145 mm-150 mm approx. below 1 kg weight, Class 1.0):
- (I) 0-1A-2A – 2 no.s
  - (II) Center zero type, 10A-5A-0-5A-10A – 1 no.
- (b) Multirange Moving Iron Ammeters (Table-top model, 250 mm x 190 mm x 80 mm approximate size, black engineering plastic housing, scale length 145 mm-150 mm approx. below 1 kg weight, Class 1.0):
- (I) 0-2.5A-5A – 2 no.s
- (c) Multirange Electrodynamic Wattmeter, single phase,  $\cos \Phi = 0.2$ , current coil range/rating 0-5A-10A, pressure coil range/rating 0-125V-250V-500V, full scale, in robust housing suitable for portable indoor laboratory use, accuracy 1.5% - 2 no.s

Manufacturer's test certificates (routine) must be provided during supply for each meter. The meters should have a robust housing and should have high resistance to shocks and vibrations. The insulation strength should be commensurate with 2kV at power frequency AC testing

Warranty of minimum 2 years should be given.

*Techno-commercial evaluation will be made considering all the instruments of item-1 as a single combined group. The vendor, who will satisfy the technical requirements of all the sub-items and quotes the minimum total price for all the sub-items under (a), (b) and (c) of item-1 as a group will be considered as the lowest bidder. Quantity is representative and will be finalized based on funds available.*

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**Item 2:** Analog Tachometers: 1 number, Analog tachometer (Fuji make/equivalent reputed) required having following specifications:

Measuring range	0 – 10,000 RPM
Long pointer 1 rev =	1,000 RPM (10 p.m. / unit scale)
Short pointer 1 rev =	10,000 RPM (1000 rpm / unit scale)
Peripheral speed 1 rev =	100 m (1 m / unit scale)
Peripheral speed 1 rev =	1000 m (100 m / unit scale)
Accuracy	within 2% of indicated scale
Scale plate diameter	58 mm
Size w/o attachment	87 x 113 x 25 mm (W x L x H)

Net weight 300g

Gross Weight 450g

Warranty – standard

*Techno-commercial evaluation will be made considering all the instruments of item-2 as another single group. The vendor, who will satisfy the technical requirements of item-2 as a group will be considered as the lowest bidder.*

**Item 3:** Vacuum cleaner – 1 set, as per specifications below, Bosch make/equivalent reputed make, with standard warranty

ITEM	SPECIFICATION
DRY & WET VACUUM CLEANER WITH BLOWER FUNCTION	Weight 6 kg
	Container volume, minimum 10 ltr
	Rated input power approx 1080 W
	Container volume, minimum 15 l
	Container volume, net, water 8 ltr
	Tool dimensions (length) approx 360 mm
	Tool dimensions (height) approx 440 mm
	Filter surface area approx 2,350 cm <sup>2</sup>
	Max. airflow rate (turbine) approx. 53 l/s
	Max. vacuum pressure (turbine) approx. 270 mbar
	Wheels, number 4 , rugged
	Voltage 230 V A.C., 50-60 HZ
	Dust Bag Volume minimum 8 ltr
	Hose pipe length at least 3 m
Air flow rate - turbine about 53 I/S vacuum cleaner about 33 I/S	

*Techno-commercial evaluation will be made considering all the instruments of item-3 as another single group. The vendor, who will satisfy the technical requirements of item-3 as a group will be considered as the lowest bidder.*

**Item 4:** Rectifiers – 1 lot (containing 2 sets) – required for Electrical Machine Laboratory, EE Department as per the following details:

- (A) Three phase full bridge diode rectifiers for power frequency rectification required, each rectifier consisting of 6 separate general purpose silicon rectifier power diodes, of reputed make, each with  $U_{RRM} = 1200V$  (at least),  $I_{Favg} = 25A$ , with threaded stud type, mounted on suitable individual heat sinks, with proper snubbers, with 3 AC side and 2 DC side terminals brought out,

with the setup mounted on rugged superior quality insulated bakelite/FRP. Layout of the devices should be such that internal connecting PVC copper wires of the said rectifier are of minimal lengths (to keep effects of stray inductances as low as possible) and proper cross section of reputed manufacturers like Finolex, Havells etc.

Notes: (i) Make of the diodes should be reputed like Vishay, Semikron etc. (ii) Warranty – 1 year

*Techno-commercial evaluation will be made considering all the instruments of item-4 as another single group. The vendor, who will satisfy the technical requirements of item-4 as a group will be considered as the lowest bidder.*

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