

THE QUOTATION MUST BE SENT IN A SEALED COVER SUPERSCRIBED  
WITH OUR REFERENCE NO. & DUE DATE.

Phone: +91-11-26596558

Fax : +91-11-26581114

E-mail :pankajs@physics.iitd.ernet.in

**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
**HAUZ KHAS, NEW DELHI-110016**

DATE: 12.09.2011

DUE DATE: 26.09.2011

**NOTICE INVITING QUOTATION**

Ref: NIQ/UPS/2011

Sir/Madam,


Please send your quotation to the undersigned in a sealed cover superscribed with our Reference No.& Due date for the following articles:

S.No.	Name of article & full specification	Numbers
1.	<p><b>A compact UPS is to be connected with an Ultra High Vacuum X-ray Photoelectron Spectrometer. The system utilizes a 3-phase, 5 wire power system (Y wiring, Y point grounded) protected by breaker switch. Each individual line has to be protected by fuse or breaker.</b></p> <p><b>(i) DIMENSIONS:</b> The typical dimensions of the main unit (excluding batteries) of the UPS must NOT exceed 80 cm (length) × 30 cm (width) × 50 cm (height).</p> <p><b>(ii) UPS RATING:</b> 20 KVA, 3 Phase Input, 3 Phase Output</p> <p><b>(iii) TOPOLOGY:</b> True Double Conversion; On Line; Full Microprocessor Control</p> <p><b>(iv) INPUT</b> <b>Voltage Range:</b> 355–495 V AC, 3 Phase; Frequency: 47–53 Hz <b>Protection:</b> Circuit breaker, RFI filter; Input PF: 0.96</p> <p><b>(v) OUTPUT</b> <b>Voltage:</b> (a) 3 Separate 3 Phase 380 VAC, 16A, 50Hz Lines (b) 2 Separate 1 Phase 230 VAC, 16A, 50Hz</p> <p><b>Isolation:</b> Output Isolation Transformer (preferable but not necessary)</p> <p><b>Regulation at Nominal Input:</b> ± 1%</p> <p><b>Overall Efficiency:</b> &gt; 90 %</p> <p><b>Frequency Tracking Range:</b> +/- 1, 2, 3 Hz Selectable</p> <p><b>Over load:</b> 125% for 10 Mins.; 150% for 30 Secs.;1000% for 1 Cycle</p> <p><b>Load Power factor:</b> 0.8</p> <p><b>Wave form:</b> Sine wave</p> <p><b>Total Harmonic Distortion (THD):</b> Less than 2% (at Linear Load)</p> <p><b>Crest Factor:</b> 3:1</p> <p><b>Protection:</b> Overload, Short circuit, Battery low voltage, high temperature, Output high /low Voltage.</p> <p><b>Transient response on 100% Load Change:</b> ± 2%</p>	One

	<p><b>(vi) BATTERIES</b>  <b>Type: Sealed Maintenance Free Lead Acid (SMF)</b>  <b>For 30 minutes backup- Min. VAH Required – 16000 VAH</b>  <b>Location: External with stand and Connecting cables</b>  <b>Make of the batteries should be clearly specified</b></p> <p><b>(vii) ENVIRONMENT</b>  <b>Ambient Temperature</b>  <b>Operating: -10 to 40°C; Storage: -20 to 60°C</b>  <b>Relative Humidity: 95% Max</b></p> <p><b>A compliance chart listing all the specifications should be prepared and submitted along with the technical bid.</b></p>	
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**TERMS & CONDITIONS COVERING SUBMISSION OF QUOTATIONS**

- 1. DELIVERY:** The rates quoted must be for C.I.F. Delhi
- 2. TERMS OF PAYMENT:** Letter of credit or other approved mode of payment
- 3. INSTITUTE'S RIGHTS:** IIT Delhi reserves the rights of acceptance or rejection of any or all quotations. The discretion for increasing or decreasing of the quantities demanded also vests with the institute.
- 4. VALIDITY OF QUOTATIONS:** Quotations should be valid at least for a period of 3 months.
- 5. CORRESPONDENCE:** No correspondence regarding acceptance/rejection of a quotation will be entertained.
- 6. SUBMISSION OF QUOTATIONS:** Quotations should be sent in a sealed cover marked at the top **OUR N.I.Q. REFERENCE AND DUE DATE** as otherwise these would not be considered. **The technical and financial bids should be sealed in separate envelopes before putting them together in the sealed cover.** Quotations should be sent to:  
**Prof. Pankaj Srivastava**  
**Department of Physics**  
**IIT Delhi, Hauz Khas,**  
**New Delhi 110 016 (India).**
- 7. REJECTION:** Quotation not conforming to the set procedure as above will be rejected.
- 8. DISCOUNT/REBATES:** Special discount/rebate wherever admissible keeping in view that the supplies are being made for educational purpose in respect of public institution of national importance may please be indicated.

  
 Pankaj Srivastava  
 Department of Physics  
 IIT DELHI, HAUZ KHAS  
 NEW DELHI-110016  
 INDIA