

**SCHOOL OF SAFETY AND OCCUPATIONAL HEALTH ENGINEERING,
CENTER FOR HEALTHCARE SCIENCE & TECHNOLOGY**

Indian Institute of Engineering Science and Technology, Shibpur; Howrah-711103

Tender Advt. No: AR/D(AA)/16/20

Dated: 22/04/2016

Sealed tenders are invited by the SCHOOL OF SAFETY AND OCCUPATIONAL HEALTH ENGINEERING Indian Institute of Engineering Science and Technology, Shibpur, Howrah-711103 for the supply of laboratory items and works.

Tender Documents containing details of the items and terms and conditions may be downloaded from the university website and completed bidding documents are to be submitted to the **Head, Centre for Healthcare Science & Technology, Indian Institute of Engineering Science and Technology, Shibpur; Howrah-711103** or dropped into the Tender Box kept in the Center **within fourteen days of publication of this advertisement.**

Enclosed: **Section- I: General conditions and Important Instructions for Bidders.**

Section-II: Detailed Specification of the Items.

*Prof. Amit Roy Chowdhury
Head,
Centre for Healthcare Science and Technology*

SECTION-I: General Conditions and Important Instructions for Bidders

1. Interested parties/vendors are to download the tender documents with detailed specifications from the institute website (www.iiests.ac.in)
2. It is necessary to submit the original tender documents alongwith technical/price bids in sealed envelopes to the **Head, Centre for Healthcare Science and Technology (CHST), Indian Institute of Engineering Science and Technology (IEST), Shibpur; Howrah-711103**, or directly to **Drop** in the **Tender Box** kept in the Centre at the 2nd floor of Heaton Hall building (above Hospital and UBI, BESUS branch)
3. Bids are to be submitted in sealed envelope superscribed with the “**Tender Advt. No.**” along with the bidders name and address.
4. Bidders are to abide by the terms and condition and submit this tender document in original duly signed with acceptance of the terms and conditions.
5. Last date of receipt of tender is **fourteen days from publication of advertisement up to 3.00 pm**. Tenders received late will not be accepted under any circumstances. Tenders will be opened in the Office of the Head of the Centre for Healthcare Science and Technology, on the same day at 3.30 pm. In case the University remains closed on the said date, tenders will be opened on next working day at 3.00 pm.
6. The Price Bid should clearly mention the price including the following:
 - Delivery charges up to IEST, Shibpur, Howrah, including loading and unloading charges.
 - All taxes, duties, levies applicable.
 - Erection, Commissioning and testing charges at IEST, Shibpur site
7. DGS&D rate contract price will be preferred wherever applicable. The University will not issue any C or D form availing for concessional Sales Tax/ VAT. The University will issue Customs Duty Exemption Certificate or Excise Duty Exemption Certificate for foreign purchase, if required.
8. The equipments are to be supplied at the Centre for Healthcare Science and Technology, Indian Institute of Engineering Science and Technology between 11.00 am and 4.00 pm from Monday to Friday except holidays. The bidders will be responsible for any breakage, damage or defect in the equipment detected subsequently.
9. Period of delivery of equipment/ execution of work should be within 6 to 10 weeks from the date of issue of Purchase Order. If the supply/execution is not completed within the stipulated period as indicated in the Purchase Order a Liquidated Damage @0.5% per week will be imposed on the value of purchase order subject to maximum of 5% of the value of work order.
10. Bills in triplicate should be presented for payment within 15 days of supply/ commissioning of work. No advance is paid for execution of the order. The Order No. is to be noted on both Challan and Bill. All bills are to be accompanied by order copies and Challan receipt.
11. Payment will be made on submission of Proper Bills, Challans etc, by A/C Payee Cheque and no cash payment will be made under any circumstances.

12. All payments are subjected to statutory deductions as and when applicable.
13. Tender is to be kept valid for acceptance for 3 months with effect from the last date of issue of the tender without any modifications in its terms and conditions.
14. Documents mandatory to be submitted with the tender:
 - Tender Documents, General Conditions and Important Instruction in original duly signed by the Proprietor/ Partner/ Director of the company as a token of acceptance of Terms and Conditions of Tender.
 - OEM certificate/Authorization letter from manufacturer in the name of the Head, CHST; IEST, Shibpur against this tender enquiry only/ UCAS/CE/ISO or other international certification, if applicable.
 - Latest Income Tax, Sales Tax, Professional Tax clearance certificates and copy of valid Trade License
 - Bid according to specifications.
 - Certificates and Literature in support of the item.
16. For all equipments the comprehensive warranty period must be mentioned. Calibration/ Test Certificate must accompany along with the equipment. Supply of equipment shall include installation, erection, commissioning and demonstration. Indian Institute of Engineering Science and Technology, Shibpur, Howrah reserves the right to accept/ reject all or any of the bidders without assigning any reason whatsoever.

I/We accept the above terms and conditions.

Signature of vendors with date & Seal

SECTION II: DETAILED SPECIFICATIONS

Name of items/works	Specifications
1. Workstation (Qty1)	<p>HP Z840 Workstation (Qty 1)</p> <ol style="list-style-type: none">1. CPU: Intel® Xeon ® Processor E5-2650 v2/v3, 2.6 GHz , 20MB L3 Cache2. Motherboard : Intel C602 chipset/ batter3. Memory: 8GB DDR3 1600 MHz expandable to 256 gb or batter4. Hard Disk Drive: 1 TB SATA HDD, 7200 rpm5. Storage controller: SATA Controller RAID Support 0&1.6. Keyboard: Standard keyboard7. Mouse: Optical scroll mouse8. PCI Slot: 5 PCI/PCI Express including 2 PCI Express X16 for Dual Graphics and TESLA Card Support.9. Bays: Total 4 Bays (2 internal, 2 external)10. Ports: 5USB 2.0, 2 USB 3.0, RJ-45, audio in, audio out, mic in.11. Cabinet: Mini tower12. Optical Drive: 8X DVD Writer13. Networking features: Integrated 10/100/100014. OS- Windows 8.1 Professional 64 bit or higher15. OS Certification: Windows and Red Hat or Suse Linux or Ubandu Linux16. Application: As per list enclosed at annexure-A OEM Certification for<ol style="list-style-type: none">a) Digital Content Creation (DCC)b) Electronic Design Automation(EDA)c) Mechanical Computer Aided Design (MCAD) from OEM manufacturing workstation shall be acceptable.17. Safety Certification: As per IEC: 60950-1/IS:13252 with all amendment upto date.18. Power Supply: 230 V±10% Single phase, 50Hz AC19. Power Management: ACPI (Advance Configuration and Power Management Interface.20. Bundle Software: System Health monitoring tool available with H/W box.21. Security: Integrated Panel lock/ pad lock. <p>HP 24" Workstation Monitor (Qty 1) TFT Monitor for high resolution graphics (1920x 1200), 60.9 cm/24".</p> <p>Graphics Card (Qty1) 512 MB NVIDIA Quadro 410 or higher.</p>

2. SLR with high dynamic range shooting

Type	Digital, single-lens reflex, AF / AE camera
Recording Media	CF card (Type I, UDMA mode 7-compatible), SD memory card, SDHC memory card, SDXC memory card
Image sensor size	Approx. 36 x 24mm
Compatible Lenses	EF lenses (except EF-S lenses) (35 mm-equivalent lens focal length indicated on the lens)
Image Sensor	
Type	CMOS sensor
Effective Pixels	Approx. 22.30 megapixels
Aspect Ratio	3:2
Dust Delete Feature	Auto, Manual, Dust Delete Data appending
Image Processing During Shooting	
Picture Style	Auto, Standard, Portrait, Landscape, Neutral, Faithful, Monochrome, User Def. 1 - 3
White Balance	Auto, Preset (Daylight, Shade, Cloudy, Tungsten light, White fluorescent light, Flash), Custom, Colour temperature setting (Approx. 2500 - 10000K), White balance correction, and White balance bracketing possible * Flash colour temperature information transmission enabled
Noise Reduction	Applicable to long exposures and high ISO speed shots
Lens Peripheral Illumination Correction	Peripheral illumination correction, Chromatic aberration correction
Viewfinder	
Type	Eye-level pentaprism
Coverage	Vertical / Horizontal Approx. 100% (with Eye point Approx. 21mm)
Magnification	Approx. 0.71x ($-1m^{-1}$ with 50mm lens at infinity)

Eyepoint	Approx. 21mm (from eyepiece lens center at -1m^{-1})
Build-in Dioptric adjustment	Approx. $-3.0 - +1.0\text{m}^{-1}$ (dpt)
Autofocus	
Type	TTL secondary image-registration, phase detection
AF Points	61 points (Up to 41 cross-type points) * Number of available AF points and cross-type points vary depending on the lens.
Focusing Brightness Range	EV -2 - 18 (with center f/2.8 AF point, $23^{\circ}\text{C} / 73^{\circ}\text{F}$, ISO 100)
Exposure Control	
Metering Modes	63-zone TTL full-aperture metering <ul style="list-style-type: none"> • Evaluative metering (linked to all AF points) • Partial metering (Approx. 6.2% of viewfinder at center) • Spot metering (Approx. 1.5% of viewfinder at center) • Center-weighted average metering
Metering Range	EV 1 - 20 (at $23^{\circ}\text{C} / 73^{\circ}\text{F}$ with EF50mm f/1.4 USM lens, ISO 100)
ISO Speed (Recommended exposure index)	Scene Intelligent Auto: ISO 100 - 12800 set automatically P, Tv, Av, M, B: Auto ISO, ISO 100 - 25600 (in 1/3- or whole-stop increments), or ISO expansion to L (50), H1 (equivalent to ISO 51200), H2 (equivalent to ISO 102400)
HDR Shooting	
Dynamic Range Adjustment	Auto, ± 1 EV, ± 2 EV, ± 3 EV
ISO range	50 - 102800
Maximum shooting rate	6fps
Shutter	
Shutter Speeds	1/8000sec. to 1/60sec. (Scene Intelligent Auto mode), X-sync at 1/200sec.

	* With a wide-angle lens, the shutter speed may be 1/60sec. or slower. 1/8000sec. to 30secs., bulb (Total shutter speed range. Available range varies by shooting mode.)	
Metering Modes	Center-weighted average and Evaluative metering with the image sensor * Automatically set by the focusing mode.	
Metering Range	EV 0 - 20 (at 23°C / 73°F with EF50mm f/1.4 USM lens, ISO 100)	
LCD Monitor		
Type	TFT colour, liquid-crystal monitor	
Monitor Size and Dots	Wide, 8.1 cm (3.2-in.) (3:2) with Approx. 1.04 million dots	
Image protect:	Possible	
Copying images	Possible	
Battery Life (Based on CIPA testing standards)	With viewfinder shooting:	Approx. 950 shots at 23°C / 73°F, Approx. 850 shots at 0°C / 32°F
	With Live View shooting:	Approx. 200 shots at 23°C / 73°F, Approx. 180 shots at 0°C / 32°F
Movie Shooting Time	Approx. 1hr. 30mins. at 23°C / 73°F Approx. 1hr. 20mins. at 0°C / 32°F (with fully-charged Battery Pack LP-E6)	
Date / Time Battery	CR1616 lithium battery (Quantity 1)	
Weight	Approx. 125g / 4.4oz. (excluding power cord)	
EF24-105mm f/4L IS USM		
Angle of View	Diagonal extent:	84° - 23°20'
	Horizontal extent:	74° - 19°20'
	Vertical extent:	53° - 13°
Lens Construction	18 elements in 13 groups	
Minimum Aperture	f/22	
Closest Focusing	0.45m / 1.48ft. (from image sensor plane)	

	Distance	
	Max. Mag.	0.23x (at 105mm)
	Field of View	535 x 345 - 158 x 106mm / 21.1 x 13.6 - 6.2 x 4.2in. (at 0.45m)
	Image Stabilizer	Lens shift type
	Filter Size	77mm
WBGT Meter	<p>Heat Stress Index measures how hot it feels</p> <ul style="list-style-type: none"> ○ Humidity with temp, air movement, & radiant heat Black Globe Temperature (TG) ○ Monitors direct solar radiation on an exposed surface In/Out Function displays the WBGT value ○ With or without direct sun exposure 	
Lux meter	<p>Wide range to 40,000Fc or 400,000 Lux with max resolution to 0.01 Fc/Lux</p> <p>Relative mode indicates change in light levels, peak mode captures highest reading</p> <p>Remote light sensor on 12" (30.5cm) coiled cable — expandable to 24"</p> <p>Utilizes precision photo diode and color correction filter</p> <p>Large LCD display with analog bargraph; Backlight for readings in low light levels</p> <p>Complete with 9V battery, light sensor with protective cover, protective holster, and soft case</p>	
NPI Goniometer	<p>8.5 inches clear plastic protector goniometer. Measurements displayed in inches and centimeter (on both arms).Scale reads 1-degree increments.National Posture Institute branded goniometer</p>	