Gautam Buddha University

Greater Noida – 201 308

BID FORM

FOR SUPPLY OF

LABORATORY EQUIPMENTS

to

School of Architecture & Built Environment

GAUTAM BUDDHA UNIVERSITY

GREATER NOIDA – 201308

www.gbu.ac.in

Gautam Buddha University
(SCHOOL OF ARCHITECTURE & BUILT ENVIRONMENT)

TENDER FOR SURVEYING LABORATORY EQUIPMENTS

Tender	**Supply, installation, Demonstration of the instruments/equipment for Surveying Laboratory**
Opening Date:	10th December, 2010
Closing Date :	10th January, 2011 upto 3.00 p.m.
Bid Submission Date:	10th January, 2011 upto 5.00 p.m.
Technical Bid Opening Date, Time & Place:	11th January, 2011 on 2.00 p.m. at Registrar Conference Room, 1st Floor, Administrative Building.
Earnest Money Deposit:	2% of the offered cost
Completion Period:	Within 4 weeks from the date of Purchase Order Issued
Bid System	Two Bid System : 1) Technical Bid and 2) Financial Bid
Technical Bid Shall Contain	i. Technical specifications of each equipment ii. All documents in support of commercial terms & conditions and eligibility criteria. iii. Bidders Proforma
Financial Bid	The Financial Bid shall contain rate schedule only. The price shall be in words as well as in numeric numbers.

"TECHNICAL BID (BIDDER'S PROFORMA)" Form - 1
(To be submitted in separate envelope)

1. Name of the firm: ……
2. Date of incorporation……..
3. Name of the company – Government/Public Ltd/Private Ltd/Partnership/ Proprietorship: ……..
4. Specify the number of years in this line of activity by the company:……..
5. Sales Tax/VAT registration No. (Please attach certificate) : ……
6. Experience (in year) of supplying & installation for similar laboratory equipments to IITs, NIT's or Central Universities or any Academic Institute of National Repute (please attached certificate/P.O.) : ……..
7. Turnover in the last three years (Figures should be in Indian Rupees in Lakhs; please attach the certified copies of balance sheet) : (if the figures for 09-10 are not available then they may furnish balance sheet of year 06-07)
8.

2007-08	2008-09	2009-10

9. Provide the postal address, telephone & fax numbers, and email address of the nearest service center: ……
……
10. What would be the delivery period from the date of the placement of an official purchase order: ……..
11. Enclose the list of customers to whom you have supplied /serviced during the last 3 years ending 31/03/2010 with full postal address and name of the contact person with phone, FAX numbers, and E-mail-id, billing amount etc. Certificate regarding satisfactory performance from the minimum three end users should be furnished.
12. Are you the manufacturer / authorized dealer / distributor/ reseller for the product quoted (please attached relevant certificate): ……..
13. Was there any elapse or delay in supplying the goods ordered or any service related issue during the warranty period for the products supplied by your firm to different Institutes/Universities during last three years? If yes, provide details.
14. Deviations in specifications, if yes, please mention in separate sheet.
15. Whether technical specification are attached with Technical Bid or not. Yes/No

DECLARATION

1. The rates quoted in financial bid are inclusive of all taxes, packing, handling and installation charges.
2. The information given in the financial bid by the undersigned is correct.

(SIGNATURE OF THE BIDDER)
WITH SEAL

NAME : ……

ADDRESS: ……

: ……

: ……

Tel./Mobile No. : ……

Note: The financial bid is required to be submitted separately in a sealed cover super scribing as 'Laboratory equipment for School of Architecture & Built Environment'.

"TECHNICAL BID (Form – 2)"
(To be submitted with technical bid)

Sl. No.	Name of Equipments	Make	Deviation from specified technical specification if any
1	Survey Chains		
	Metric chain 20 m length		
	Metric chain 30 m length		
	Gunter's chain, 100' length		
	Revenue chain		
2	Distance Measuring Tapes		
	Freeman's metallic tape, 30		
	Freeman's metallic tape, 50 m		
	Steel tape, 20 m		
	Steel tape, 30 m		
	Invar Tape 20 m length		
3	Wooden Pegs		
4	Chaining Arrows		
5	Ranging rods		
6	Plumb bobs made of brass		
7	Cross Staff		
8	Optical Square round type		
9	Prism Square		
10	Offset Rod		
11	Survey umbrella		
12	Plane Table		
13	Alidade (Telescopic)		
14	Clinometer		
15	Trough Compass		
16	Spirit Level		
17	Plumbing Fork		
18	Digital Planimeter		
19	Prismatic Compass		
20	Surveyor's Compass		
21	Hand Levels		

Sl. No.	Name of Equipments	Make	Deviation from specified technical specification if any
22	Dumpy Level 9 “		
23	Tilting Level		
24	Vernier Theodolite		
25	Electronic Theodolite		
26	Auto Level		
27	Digital Level		
28	Staves		
29	Hand Held GPS		
30	Robotic Total Station, 2" Accuracy		
31	Total Station : Motorised, 2" Accuracy, Semi Automatic		
32	Total Station : 2” Accuracy		
33	Single Frequency GPS		
34	Dual Frequency DGPS		

Gautam Buddha University

(School of Architecture & Built-Environment)

(Technical Specifications of Required Equipments)

Sl. No.	Name of Equipments with specification
1	Survey Chains; Conforming to IS : 1492, Made of 8 SWG Wire
2	Distance Measuring Tapes conforming to relevant BIS code.
	(A) Freeman's make or equivalent
	(B) Steel tape
	(C) Invar Tape
3	Wooden Pegs - conforming to relevant BIS code
4	Chaining Arrows : Made of hardened round steel, painted red and white. 7/32" Dia., 14"L; Conforming to relevant BIS code.
5	Ranging Rods : Made of steel conduit pipe. Alternatively painted black and white or red and white. Fitted with strong shoe at the bottom; conforming to relevant BIS code.
6	Plumb bobs made of brass, conforming to relevant BIS code
7	Cross staff, conforming to relevant BIS code
8	Optical square round type complete with wooden box, conforming to relevant BIS code
9	Prism square complete with wooden box, conforming to relevant BIS code
10	Offset rod, conforming to relevant BIS code
11	Survey umbrella; 62" Diameter. 1-1/4" x 83" pole, 2 vinyl
12	Plane table with tripod stand conforming Is:2539 1963 BIS code
13	Alidade (Telescopic) conforming to relevant BIS code
14	Clinometer conforming to relevant BIS code
15	Trough Compass conforming to relevant BIS code
16	Spirit level conforming to relevant BIS code
17	Plumbing fork conforming to relevant BIS code

Sl. No.	Name of Equipments with specification
18	**Digital Planimeter** Measuring range: 325-600 mm vertical; 30 m horizontal, Accuracy: within ±0.2% (within ±2/1000 pulses).
19	**Prismatic Compass** Prismatic compass with coloured glasses and aluminium stand in waterproof cover; 112 mm dia., full non–magnetic metal body, arrangement for lifting and locking of needle when not in use. Hermetically sealed against moisture and dust, foldable and portable aluminium stand, aluminium floating circle graduated to read 30', sliding prism fitted with coloured glasses; High Quality and Robust, Accurate to within 30 Minutes / 10 Mils, x 24 Magnification through prism, Tritium illumination (5 s). Less than 0.25 degrees or 5 Mils. Friction Robust Brass constructions for longer life. Conforming to IS-1957-1961.
20	**Surveyor's Compass** Made of gun metal with metal circle graduated to full degree with two bubble and bar needle fitted with real agate stone to give very accurate bearing, supplied in fiber case with Aluminium stand having ball and socket head. Confirming to relevant BIS code.
21	**Hand Levels** Complete with canvas cover; 1 11/16" radius arc graduated 0 to 90 degrees in both directions and vernier reading to 10 minutes. Also includes percent scale reading 0 to 100 percent in both directions. Other features include 1:100 stadia, easy-slide focusing motions for objective and eyepiece and durable enamel finish. Instrument is 7 3/4" on extending to 8 5/8".
22	**Dumpy Level** Internal focusing telescope having 3 foot screws leveling base with locking arrangement, diaphragm etched on glass with Stadia 1:100, screw focusing eye piece, highly sensitive spirit bubbles, aperture not less than 3.76 cm. Magnification 38 X, fitted with magnetic compass having prismatic reader, longitudinal bubble with folding reflector. Kept in wooden box with Aluminium Folding Stand.
23	**Tilting Level** Telescope magnification 25 X or better, Objective aperture 40mm, Minimum focus 1.8m, Accuracy (Standard deviation) for 1km double-run levelling 2.0 mm without micrometer. Main level sensitivity 40" / 2mm, Horizontal circle graduation 1" (1gon).
24	**Vernier Theodolite** 20" least count with diaphragm extractor, sun filter, ray shade, cleaning brush etc. with telescopic aluminium stand in waterproof cover ; IS 2988, 178 mm internal focusing telescope, 20 sec accuracy with optical plummet, full metal body, Hermetically sealed against moisture and dust, erect image, 25 X magnification, effective aperture 38 sec, field of view 2.6m at 100m, short focus 1.5m, range 700', stadia ratio 1:100, zero stadia constant, horizontal circle diameter 113mm, vertical circle diameter 100mm, graduation and Vernier reading 20 sec, vertical circle level sensitivity ½" mm and vertical circle level 45/2" mm.
25	**Electronic Theodolite** Telescope : Image erect, magnification – 30 X or better, Aperture – 40 mm, Focus distance – 1.35 m or better, Field of view – $1^{o}30'$, Stadia ration/constant – 100/0, Optical plummet : erect image, 3X magnification, focusing rage 0.50 m, Reticle type cross hairs; Angle measuring system: least count – 1" or better, precision – 2" or better, Display – dual, large character, backlit LCD; Tilt Sensor: Automatic compensator - +-3" range, user set on/off;

Sl. No.	Name of Equipments with specification
	Vials: Tubular – 30”/2 mm, Circular 8’/2 mm; One touch button functions; Dust –water proof.
26	**Auto Level** Telescope: Magnification – 28 X or better, Aperture – 30 mm, erect image, field of view – $1^{o}20'$, shortest focusing distance 0.60 m; Accuracy: +/- 1.5mm or better; Leveling Accuracy 1.5mm @ 60 m or better; Compensator: Air Dampened.
27	**Digital Level** Electronic Measurement: Invar precision bar code staff – 0.7 mm; Standard bar code staff – 1.3 mm; Visual measurement – 2.0 mm; Distance measurement with a 20 m sighting distance , visual measurement - 25 mm, Standard bar code staff – 30 mm, visual measurement – 0.30 m. Range : Electronic measurement – 1.5 m to 100 m, visual measurement from 1.30 m, Resolution height measurement – 0.1 mm, Resolution distance measurement – 10 mm, Measurement time – 2 sec. Horizontal Circle : Type of graduations – 360 degrees, graduation interval – 1 deg estimation to 0.1 deg; Single measurement with and without stationing, stakeout, line levelling with intermediate sight and stakeout, Levelling method - BF, BFFB, aBF, aBFFB; Environment : Operating temperature - –20 °C to +50 °C, Dust and water proof – IP55. Telescope : Magnification – 26 X or better, Aperture – 40 mm or better, Field of view – 2.2’ or better, Electronic measurement field – 0.30 m; Compensator : Inclination range - ±15' or better, Setting accuracy - ±0.5" or better, Circular level – 8’/2 mm with illumination; Display – graphical 240 x 160 pixels, monochrome with illumination; Keyboard – 19-key alpha-numeric and 4 way arrow key for navigation; Recording - Internal memory - up to 30 000 data lines, External memory - USB Flash Drive support; Data transfer - USB Interface for data transfer between DL and PC (means two way communication); Power supply : Internal battery - Li-Ion, 7.4 V / 2.4 Ah, Operating time – 3 days working without illumination, Weight including battery – approx 3.5 kg.
28	**Staves** 4M Satff-4sec, Telescopic, Iodized coated
29	**Hand Held GPS** System: Windows Mobile 6.1 in English, 533 MHz Samsung processor, Integrated Bluetooth v2.0 wireless technology, Integrated 802.11b/g wireless LAN, Integrated digital camera (color, 3 megapixel resolution), 128 MB RAM, 128 MB non-volatile Flash data storage, MicroSD (microSDHC compatible) memory card slot, QVGA display (240 x 320), sunlight-readable color touch screen, All-day internally rechargeable and removable Li-Ion battery, Integrated speaker and microphone, Audio jack. With all Standard Software: Microsoft Office Mobile, includes Excel Mobile, Word Mobile, Internet Explorer Mobile, Outlook Mobile, and PowerPoint® Mobile, Adobe Reader, Transcriber (handwriting recognition). Standard Accessories: AC Power supply with international adapter kit, USB data cable, Stylus (2-pack), Wrist lanyard, Rechargeable Li-ion battery, Quick Start Guide, Getting Started CD, containing User Guide. GPS: Integrated high-sensitivity GPS/SBAS1 receiver and antenna, 2 to 5 meter accuracy after real-time differential correction, 1 to 3 meter accuracy after post processing, NMEA and SiRF protocol support. **Technical specifications**: Size - 12.9 cm × 7.4 cm × 3.0 cm (5.1 in × 2.9 in × 1.2 in), Weight approx. - 0.23 kg (0.52 lb) with battery, Processor - 533 MHz Samsung S3C2443 processor, Memory - 128 MB RAM and 128 MB internal Flash storage, Battery- Internal 2600 mAh lithium-ion, rechargeable in unit ; Power - Low (no GPS, backlight ON3) 14 hours , Normal

Sl. No.	Name of Equipments with specification
	(with GPS and backlight ON) - 8 hours; Temperature – operating - 0 ºC to +60, Storage. –20 ºC to +70 ºC, Drop : 76 cm drop, 2 drops per 6 sides at ambient temperature 23 ºC, Tumble : 50 cycles (100 drops) x 50 cm (1.64 ft), 5 cycles/minute, Casing- IP4X- Protected against small objects >1 mm. Input/output: microSD Card slot (microSDHC compatible), Display- 8.9 cm (3.5 in) QVGA (240 x 320 pixel) TFT, 16 bit (65,536) colors, LED backlight, Interface - Touch screen, hardware control keys, power status LED, Audio system events, warnings, and notifications, Soft Input Panel (SIP) virtual keyboard, and handwriting recognition software; Audio - microphone and speaker, record and playback utilities, Industry-standard 3.5 mm stereo earphone jack, I/O - USB client v2.0 compliant, Radios. Bluetooth 2.04, Wireless LAN 802.11b/g, Digital Camera - 3 megapixel color camera with autofocus, JPEG photo format, WMV video format. GPS : Channels. 12 (L1 code only), Integrated real-time- SBAS1, Update rate. 1 Hz, Time to first fix. 30 seconds (typical), Protocols. SiRF, NMEA-0183, Accuracy (HRMS) after differential correction, Code Post processed - 1–3 m, Real-time (SBAS1) - 2–5 m, 1 SBAS (Satellite Based Augmentation System) Includes WAAS (Wide Area Augmentation System) available in North America only, EGNOS (European Geostationary Navigation Overlay System) available in Europe only, and MSAS available in Japan only. Using wireless technology, such as Bluetooth or wireless LAN will consume additional battery power, Backlight setting at 70% brightness. Equipment should be workable in India as per the relevant standards.
30	**Robotic Total Station, 2" Accuracy** Optical Measurement system shall be capable of measuring angles and distance with inbuilt memory as well as external memory support by USB Memory device or Compact Flash Card Drive and detachable Tribrach with built in optical centering plummet & Colour Graphical Display on both sides; Main unit should be capable of positioning itself on its own as per parameters set by user, it should have automatic pointing correction to monitor as well as correct the effect of Tilt axis & Collimation; The instrument should be able to measure accurately even after vibration and sinkage – it should actively correct errors for unwanted movements; This unit should be able to track prisms automatically upto 2500 meters; it should incorporate both active as well as passive tracking capabilities; Distance measurement range without reflector shall be upto 2200 m or better on white surface & upto 5500 m or better with single prism under average atmospheric conditions; The unit shall be capable of automatically search & lock on to the prism within a distance range of Upto 800 meters or better. The unit should be operational in Robotic mode (from the Prism end) by connecting the control unit on the Rod; it should be possible to perform all the functions in Robotic mode as well; Accuracy of the system shall be 2” (Angular) or better, 1 mm + 2 ppm / 2 mm + 2 ppm (Distance with & without Prism), and with the least Count of 0.1” (Angular) & 0.1 mm (Distance); Telescope magnification shall be 30 X or better; Display on both faces; Display shall be illuminated colour Graphical LCD of minimum 320 x 240 pixels capable of displaying points, lines and polygons with point id’s on the instruments display; Zoom in and Zoom out facility should also be available; Display should have status icons to indicate parameters like battery status, memory status, instruments face, measurement type etc. should be touch sensitive & with Latest Windows Mobile Operating system. Memory shall be minimum 128 MB SDRAM, 1GB Internal non-volatile storage memory & 2GB or higher external using Memory stick/compact flash card; Battery of the instrument shall be Re-chargeable Lithium-ion battery, capable of continuous operation of 6 hours or

Sl. No.	Name of Equipments with specification
	more. Two spare batteries are also to be supplied along with the instrument, without any extra cost. Provision for connecting 12 V car battery should also be provided; Compensator shall be with range of +/- 5.4' with an accuracy of 0.5' or better; Onboard Programs display for all the survey e.g. automatic monitoring with defined time interval, Traverse/Surveying with graphical display of Points, lines and polygons, Setting out/Stake out of points, Area computation as well as division in the field, COGO (Coordinate Geometry), for performing various coordinate geometry calculations like calculating direction, distances and coordinate differences between 2 known points or for calculation of coordinate from given distance and angle from known point. Intersection points between lines should also be possible; Program for automatic Monitoring should be available; The unit should be capable of measuring at least 30 points per minute in auto scanning mode; The instrument shall be capable of working in between the temperature range from -20 to 50 degree centigrade (Operation) and better in storage. It shall be capable of working in 95% Non-condensing Humidity; Software required for data acquisition and detailed surveying related analysis like contour generation, map preparation etc. shall be included in the offer.
31	**Total Station : Motorized, 2" Accuracy, Semi Automatic** Angular Measurement accuracy, 2" or better; Least count for angular measurement 1" or better; Automatic level compensator - Dual-axis compensator + 5 (+ 100 mgon); Distance Measurement – accuracy (s. dev.) *w*ith prism mode (+ / - 2 mm + 2 ppm) mm, standard - + (+ / - 5 mm + 2 ppm) mm, tracking - + (3mm + 2 ppm), DR mode - + (10mm + 2 ppm); Shortest possible range to a prism – 1.5 m; Measuring time - prism mode - 1 to 2 sec or better, DR mode 1-4 sec or better; Range – prism mode, 1 prism – 2500 m, 3 prism – 5000 m or better, DR mode – 400 m or better; Control Unit – CU with touch screen operating on Window CE 6.0 system, processor with speed of 624MHz, Integrated Blue tooth communication, COLOURED Graphical display of the measured points, with numbers, lines etc., able to load DXF background map for viewing and checking for greater data control & confidence, Compatible for integrated survey using GPS receivers. Date transfer in the field using Compact flash and/or USB Memory stick directly plugged to the instrument for cable free downloading; 128MB Internal SD RAM, 128MB Flash Memory; Display - colour, readable in daylight with touchpad and resolution 320x240 pixels; Telescope Focussing - Servo driven (Motorized) focussing for easy operation; Power - 6 hours of continuous operation with single internal battery; Operating temperature - 20 Deg to + 50 Deg C; Light Source - Laser pointer coaxial (standard)- Pulsed laserdiode 660 nm, Laser class 1, Laser class 3R , Beam divergence – horizontal (4 cm/ 100 m), vertical (4 cm/ 100 m), Atmospheric correction - 130 ppm to 160 ppm continuously; Circular level in tribrach -8'/2 mm; Electronic 2-axis level in the LC-display with a resolution of 0.30 "; Servo system – Mag Drive servo technology, integrated servo/angle sensor electromagnetic direct drive; Rotation speed - 85 degrees/sec, Rotation time Face 1 to Face 2 - 3.2 sec; Clamps and slow motions - Servo-driven, endless fine adjustment centering; 3-pin centering system; Built-in optical plummet; Magnification / shortest focusing distance - 2.3 X / 0.5 m-infinity (1.6 ft – infinity); Telescope – Magnification – 30X or better, Aperture – 40 mm, Field of view – 2.6 m at 100 m, shortest focusing distance – 1.5 m, Dust and water proof – IP55; Power supply – Internal battery – rechargeable Li-ion battery 11.1 V, 4.4 Ah, 6 hour operating time; Controller software - Software should be able to support data collection, feature, coding, cogo functions, should be able to generate plots, should be able to do sub-division of plots, should support, active DXF maps as background files, should be able to link ASCII files with graphic display of measured points & points from the linked file; Downloading Software - Field Data Module (FDM) software Pack should be capable of generating area, volume, automatic drawing generation from feature code, 3 Dimensional View, Generation of

Sl. No.	Name of Equipments with specification
	formats to Export to third party software, complete FDM software pack supplied with original software CD and manual; ; Complete in all respect along with all accessories.
32	**Total Station : 2"Accuracy** Angular measurement accuracy, 2" or better; Least count for angular measurement 1" or better; Automatic level compensator, type – dual axis with a working range of +/- 3.5 min or better; Telescope magnification – 30X or better; Distance measurement should be with and without prism; capable of distance measurement with class 1 laser (Reflector less/Prism mode), class-2 laser (laser pointer/laser plummet); Measuring time 1 – 2 sec or better; Distance accuracy *w*ith prism - 3500 meters or better and without prism – 270 meter or better; Distance accuracy *w*ith prism (+ / - 2 mm + 2 ppm) mm and without prism - (+ / - 3 mm + 2 ppm) mm; Distance measurement range - under normal atmospheric condition i.e. 20 kms visibility; Detachable tribrach for traversing application; Rechargeable batteries; Rechargeable lion internal batteries (1 no + 1 no additional) working time up to 6 hrs each minimum (total capacity 12 hrs, min for 2 batteries); Charger with cable – one set, Instrument should be able to operate on external 6 v battery, necessary original battery cables to be provided; Operating temperature - -20 deg. C to + 50 deg. C or better; Friction clamp with endless slow motion for fine movement of telescope; Inbuilt laser plummet; Track light / guide light preferred in the instrument for fast stake out operation and signalling; Automatic change of signal (prism) height with change from ir to dr mode in instrument; Data downloading - from suitable data storage device to computer, Instrument should have facility to connect USB drive or card memory; Instrument Control unit / keyboard - windows ce.net color controller, touch screen having front light illumination with passive touch screen works with stylus or finger - display unit should be day light readable in bright outdoor atmospheric conditions -control unit should have both touch screen and hard key pad operation, Display - colour graphical display; Communication port - R 232 port with minimum two of the below communication port should be Available in the instrument Serial/ usb/ Ethernet/memory card slot/ Bluetooth; Instrument memory - internal 128 MB or better; External – card memory/USB drive with total memory storage capacity of 2 GB or better; Controller software - Software should be able to support data collection, feature, coding, COGO functions, should be able to generate plots, should be able to do sub-division of plots, should support, active DXF maps as background files, should be able to link ASCII files with graphic display of measured points & points from the linked file; Survey software - Software capable of generating – CAD based automatic drawing, generation from feature codes - area - volume - 3 dimensional view, generation of formats to export to third party software; Complete in all respect along with all accessories.
33	**Single Frequency GPS** **PERFORMANCE SPECIFICATIONS: Measurements** - 12 Channels L1 C/A Code, L1 Full Cycle Carrier, WAAS/EGNOS, Maxwell GPS technology for robust satellite tracking; **Static and Fast Static GPS surveying -** Horizontal - ±(5 mm + 1 ppm) RMS or better, Vertical - ±(5 mm + 1 ppm) RMS or better; **Kinematic surveying -** Horizontal - ±(10 mm + 1 ppm) RMS or better, Vertical - ±(20 mm + 1 ppm) RMS or better. **HARDWARE : GPS system** – Approx dimensions (W×H×L) -9.5 cm × 4.4 cm × 24.2 cm, Approx weight - with internal battery: 0.62 kg (1.37 lb), Casing - lightweight, fully sealed, toughened industrial plastic, Dust and water proof – IP6X & IPX7; Shock and vibration tested and meets the following environmental standards – Shock - Should survive a 1 m (3.28 ft) drop onto concrete, Vibration -Should have on each axis; **Electrical –** power DC input 5.0 V, Power - 0.6 W receiver and antenna (also external antenna). Complete set will required tools and accessories along with complete processing software for final output (GNSS and

Sl. No.	Name of Equipments with specification
	Mapping). Equipment should be workable in India as per relevant standards.
34	**Dual Frequency Integrated GPS** Measurement - Advanced Maxwell™ 5 Custom Survey chip with 72 Channel; High precision multiple correlator for GPS pseudo range measurements; Unfiltered, unsmoothed pseudo range measurements data for low noise, low multipath error, low time domain correlation and high dynamic response; Very low noise carrier phase measurements with <1 mm precision in a 1 Hz bandwidth; Signal-to-Noise ratios reported in dB-Hz; Proven low elevation tracking technology; Satellite signals tracked simultaneously - GPS: L1C/A, L2E (method for tracking L2P), Upgradable to GLONASS1: L1C/A, L1P, L2C/A (GLONASS M only), L2P, SBAS: L1C/A. **Code Differential Positioning Accuracy:** Horizontal -0.25 m + 1 ppm RMS, Vertical - 0 .50 m + 1 ppm RMS; WAAS differential positioning accuracy typically <5 m 3DRMS. **Static and fast static Surveying Accuracy:** Horizontal 3 mm + 0. 1 ppm RMS, Vertical 3. 5 mm + 0. 4 ppm RMS. **Kinematic surveying :** Horizontal 10 mm + 1 ppm RMS, Vertical 20 mm + 1 ppm RMS; **Initialization time typically <25 seconds :** Initialization reliability5 typically >99 9%, Data storage on 11 MB internal memory: 302 hours of raw observables, based on recording every 15 seconds from an average of6 satellites, 1 Hz, 2 Hz, 5 Hz, and 10 Hz positioning, CMR+, CMRx, RTCM 2 1, RTCM 2 3, RTCM 3 0, RTCM 3 1 Input and Output, 16 NMEA outputs, GSOF, RT17 and RT27 outputs Supports BINEX and smoothed carrier. SHOULD BE QUOTED WITH STANDARD ACCESSORIES WITH THE SYSTEM : Tripod FOR Base and Rover as required Tribrach, Tribrach Adaptor, Batteries standard to work sufficient as mentioned – Chargers, Manual, Necessary tools to operate, Processing Software for final output (GNSS and Mapping). Equipment should be workable in India as per relevant standards.

GENERAL TERMS AND CONDITIONS

1. Detailed information about equipments, specifications are available in tender document which can be downloaded from the University website www.gbu.ac.in.
2. Offer should be submitted in two parts, in two separate envelops; 1**) Technical Bid** and **2) Financial Bid**. These two envelops shall be sealed in a common cover and addressed/sent to **The Registrar, Gautam Buddha University, Greater Noida, Gautam Budh Nagar -201308 (U.P.**) super scribing "**Tender against Tender Notification Advt.:GBU/S&P/02/2010, Name of supply: Surveying Laboratory Equipments**" so as to reach us on or before last day of submission.
3. The Technical Bid and Financial Bid should be duly filled up.
4. The technical bid of the bidders will be opened first and the financial bid will be opened only of technically qualified.
5. The "**Technical Bid"** shall contain all documents in support of offered equipment specifications, commercial terms & conditions and eligibility criteria along with the page number for cited specifications in the company brochure for the particular item.
6. The **"Financial Bid"** shall contain rate schedule only. The price shall be in words and numeric numbers both.
7. **Eligibility Criteria**: All the participating suppliers/firms or principal manufacturer-should meet the following qualifying criteria. The firm should be a registered supplier for such supplies. Following documents are required to be submitted with Technical Bid, to qualify eligibility criteria:
    (a) Sales Tax/VAT registration certificate.
    (b) PAN and TIN number should be mentioned.
    (c) The firm should have experience of supplying & installation for similar laboratory equipments to institute of National repute such as IIT, NIT's, and central Universities etc. The company should also furnish a list of clients of last 5 years.
    (d) The firm should have minimum average annual turn-over of **Rs. 1.0 Crore** for previous *three* financial years. Audited balance sheet for previous *three* financial years should be submitted.
    (e) Name of branch offices & service centers after sales arrangements.
    (f) Earnest Money Deposit (EMD) **as 2% of the offered cost** and the **cost of the tender** (separately) are required to be submitted in the form of DD/Banker's cheque only, drawn in favour of "Finance Officer, Gautam Buddha University" payable at "Greater Noida" along with the Technical Bid, failing which the bid will not be entertained.
    (g) Authorized signatory should sign on all pages. Bids without authorized signature will be rejected.
8. Offer should be sent in a sealed envelope, submitted either in person or by post on which name and address of the supplier/firm shall be written. Tenders received through E-mails or FAX will not be considered.
9. The technical bids will be opened on scheduled date and time in the presence of the vendors present with authorization letter from the respective companies/firms. Suppliers intending to attend the tender opening should intimate in advance.
10. The rate quoted should be F.O.R. Gautam Buddha University (Gautam Budh Nagar, UP) in rupees inclusive of all charges e.g. packing, forwarding local taxes, railway freight, transit insurance, for outside firms and free delivery at University stores in the case of local firms. The total price should include all accessories (s) required for final installation of the equipment.

11. The equipment should have International/National validation certificates, wherever applicable.
12. The cost of the tender is Rs.1000/- (Rupees One Thousand) inclusive of taxes (Nonrefundable) and it shall be paid separately in the form of DD/Banker's Cheque only drawn in favour of "Finance Officer, Gautam Buddha University" payable at "Greater Noida".
13. The bidder must be either sole manufacturer of the instruments /equipment or the authorized agent/representative of the manufacturer. In the case of agent/representative, certified copy of the agency/authorization issued by the manufacturer should be enclosed with the tender.
14. The EMD of the successful bidder will be refunded **two** month after completion of the supply and installation of the equipment to the satisfaction of the Gautam Buddha University. If supply is not made within the prescribed period EMD would be forfeited. The EMD of the unsuccessful bidders will be returned to the concerned immediately after finalization of the tenders. No interest will be paid on EMD in any case.
15. Tenders should preferably be given only for those articles which are available ex-stock. Other items should be quoted separately giving the delivery period. Rates of imported goods should be quoted excluding custom duty, as this University is exempted from payment of custom duty (by letter of Department of Scientific and Industrial Research, Ministry of Science & Technology, GOI).
16. Detailed specifications and "Make" of each item should be clearly given supported by the illustrated pamphlets wherever possible. Quotations without specifying the make and other particulars may be rejected. The payment will be made after the goods have been received, opened, checked and found to be in order up to our entire satisfaction. The accessories included in the equipment should also be clearly mentioned.
17. Losses or damage in transit will be in to the account of the Supplier. The supplier may, if he so desires, get the goods insured and include such charges in the tendered rate.
18. Offered rates should be valid at least for two months from the last date of receipt of tenders.
19. All legal proceedings, if necessity arises to the University may be any of the parties (University or Contractor/Supplier) shall have to be lodged in the courts situated at Gautam Budh Nagar and not elsewhere.
20. (a) The equipment delivery time should be preferably within 4 week after the date of issuance of the purchase order. If the delivery time is quoted more than 4 weeks, GBU reserves all rights to permit the bidder to compete.

    (b) The Penalty Clause is as under :-

    Should the bidder fail to deliver the goods within the period specified in the Tender**,** the Competent Authority may, at his discretion, allow an extension in time subject to recovery from the bidder as agreed liquidated damages, and not by way of penalty, a sum equal to the percentage of the value of tender amount which the bidder has failed to supply for period of delay as stated below :-

i. Delay up to one week	1%
ii. Delay exceeding one week but not exceeding two weeks	2%
iii. Delay exceeding two weeks but not exceeding one month	5%

iv.Delay exceeding one month	5% for each month and part there of subject to maximum 10%

(c)In case of failure to supply the goods within the prescribed time and in accordance with the specifications give in the Quotations, the University shall be free to cancel the order.

21. The price quoted should be in Indian Rupees. 100% payment will be made only after installation and commissioning. No advance payment will be made.
22. No revision of price bid will be allowed once the price bids are opened.
23. No increase in price will be allowed after our purchase order(s) is/are placed.
24. The warranty period should be clearly mentioned. The maintenance charges (AMC), if applicable, under different schemes after the expiry of the warranty should also be mentioned in a separate sheet.
25. A warranty certificate against all the manufacturing defects covering for a period of minimum two year from the date of installation shall be given at the time of supply of the equipment. Any additional period towards warrantee will be given weightage in evaluation of the bids.
26. Inspection certificates of the instruments/ equipment inspected by the qualified engineer of the manufacturer and packed in accordance with the terms and conditions of this order must be enclosed.
27. During the warranty period or later whenever the firm is called upon to attend to the rectification of the defects/faults in the consignments, the firm shall attend to the repair work within a period of a week. They should render timely back up service whenever called upon. A certificate to the effect should be attached to the tender.
28. A certificate to the effect that instruments/equipment supplied is fully operational and no additional accessory or space is required to make the instruments/equipment run should be issued alongwith the delivery challans/invoice. GBU reserves the right to refuse payment in the event of not furnishing this certificate at the time of supply.
29. Complete user, technical and service documentation and spare parts catalogue are to be provided along with the supply of the item.
30. Firm should demonstrate the equipments for faculty and students and provide training of minimum one week duration on Digital Level, Electronic Theodolite, Total stations, GPS etc., in the University without any charges.
31. Failure to comply with all the terms and conditions mentioned herein would result in the tender being summarily rejected.
32. Vendors are informed that once the companies are shortlisted based on the eligibility criteria and technical specification, only then the financial bids of the firms that meet the eligibility criteria, technical specification / requirements would be opened.
33. Conditional tenders will not be accepted.
34. Any cutting and overwriting in the financial bid will not be accepted.
35. GBU reserves the right to change the order quantity or split the orders among multiple vendors without assigning any reason (s) whatsoever.
36. GBU reserves the right to reject any or all the tenders without assigning any reasons whatsoever.

Registrar
Gautam Buddha University

ACCEPTANCE

We accept the above terms and conditions and shall comply with them strictly.

SIGNATURE OF THE AUTHORISED SIGNATORY	: …….
NAME OF THE SUPPLIER	: …….
ADDRESS	: …….
	…….
	…….

ENVELOPE 'B'

FINANCIAL BID FORM FOR SURVEYING LAB. EQUIPMENTS

1. Name of Firm/Agency _____
2. Address of the firm _____

Sl. No.	Name of Equipments	Quantity (nos)	Unit Price (Rs.)		Total Amount
			Figures	In Words	
1	Survey Chains				
	Metric chain 20 m length	03			
	Metric chain 30 m length	03			
	Gunter's chain, 100' length	03			
	Revenue chain	03			
2	Distance Measuring Tapes				
	Freeman's metallic tape, 30	05			
	Freeman's metallic tape, 50 m	05			
	Steel tape, 20 m	02			
	Steel tape, 30 m	02			
	Invar Tape 20 m length	02			
3	Wooden Pegs	80			
4	Chaining Arrows	150			
5	Ranging rods	60			
6	Plumb bobs made of brass	15			
7	Cross Staff	12			
8	Optical Square round type	10			
9	Prism Square	10			
10	Offset Rod	10			
11	Survey umbrella	5			
12	Plane Table	5			
13	Alidade (Telescopic)	7			
14	Clinometer	2			

Sl. No.	Name of Equipments	Quantity (nos)	Unit Price (Rs.)		Total Amount
			Figures	In Words	
15	Trough Compass	7			
16	Spirit Level	7			
17	Plumbing Fork	7			
18	Digital Planimeter	2			
19	Prismatic Compass	10			
20	Surveyor's Compass	5			
21	Hand Levels	2			
22	Dumpy Level 9 "	10			
23	Tilting Level	2			
24	Vernier Theodolite	10			
25	Electronic Theodolite	5			
26	Autolevel	2			
27	Digital Level	05			
28	Staves	12			
29	Hand Held GPS	05			
30	Robotic Total Station, 2" Accuracy	01			
31	Total Station : Motorised, 2" Accuracy, Semi Automatic	01			
32	Total Station : 2" Accuracy	04			
33	Single Frequency GPS (01 base and four Rovers)	05			
34	Dual Frequency DGPS (set of base and rover)	01			

Total cost of the offer is Rs._____ in words (Rupees _____
_____. I abide by all the terms & conditions of the tender.

SIGNATURE OF THE AUTHORISED SIGNATORY : _____
NAME OF THE SUPPLIER : _____
ADDRESS : _____

_____

(Note: Please mention any variation in price of any item in case of bulk quantity)