



Government Polytechnic, Bhaga, Dhanbad

Earlier known as Mining Institute, Bhaga

(Department of Higher, Technical & Skill Development, Government of Jharkhand)

(BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad- 828120)

Email: gpbhaga@gmail.com

BOQ

for

Tender Invitation Notice- 02-130817



Government Polytechnic, Bhaga, Dhanbad

Earlier known as Mining Institute, Bhaga

(Department of Higher, Technical & Skill Development, Government of Jharkhand)

(BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad- 828120)

Email: gpbhaga@gmail.com

Tender Invitation Notice- 02-130817

Rock Mechanics & Ground Control Lab

Department of Mining Engineering

Sl. No.	List of items	Specification
1.	Compression Testing Machine	1500-2000 KN (Range) Capacity Ram Travel:- 40-50mm (Range) Daylight Clearance:-325mm (Minimum) Horizontal Clearance:-300mm Platen size:-Minimum Dia-220mm 220V/50Hz AC Supply Proving Ring 2000 KN Capacity with loading Platens conforming IS-4169 Sensitivity:-5N per division, Certified by NPL/NABL or Other approving body.
2.	Core Drilling Machine	Core cutting- core drilling machine (electrically operated) Suitable to cut / Drill cores of Rocks, Stones, Tiles concrete or the similar material. Core cutting machines (at least 100 mm dia) with 2 core bit (4 inch, 6inch) The machine is suitable for core samples of size upto 150mm diameter The base frame is also fitted with wheels for ease of transportation. Drill Speeds : 900 RPM for soft samples and 350 RPM for hard samples. Suitable for 220 volts AC, Single Phase Accessories: Thin wall diamond bit - 1 Core Barrel - 1
3.	Slack Durability Index	As Per DGMS specification

Sl. No.	List of items	Specification
	Apparatus	Or Two sets of drums of the length of at least 100 mm and the diameter of at least 140 mm. Drums rotate in water that had a level of about 20 mm below the drum axis. Rotation must be driven by a motor capable of rotating the drums at a constant speed of 20 rpm.
4.	Rock Shear Testing Machine	Steel fabricated compatible for UTM
5.	Protodykanov Index Apparatus	Fabricated as per International Society of Rock Mechanics Standard
6.	Universal Testing Machine 400 KN (General Type)	Load: Maximum capacity of Load at least 40 TON/ 400 KN. Accuracy: $\pm 1\%$ of the applied force. Least Count: 0.04 KN Measuring Range : 0- 400 KN Resolution of piston movement: 0.1mm Clearance between column: 500mm Ram stroke: 200 mm Straining/Piston Speed at no Load: 0-150mm Power of connected load: 2.5HP Dimensions: 2032 x 600 x 1960mm Weight: 1600 Kg (approx.)
6.	Universal Testing Machine (Advance)	400/440V, 50Hz Three Phase A.C Supply 1.5 H.P with hydraulic system Designed to perform variety of tests like tension, compression, etc. on metallic materials. Continuous roll autographic load recorder Provision for computer with user friendly software Auto detection and switching off provision in case of over load, over travel and specimen break. Analogue and computerized control panel Capacity: 400KN Max. Range: 10-200KN ± 0.5 KN Min. Range: 0-20KN ± 0.02 KN Maximum tensile clearance at full : (50-700 mm) decedent piston position Distance between columns: 500 mm. Piston stroke: approx 200 mm. Max Clearance for compression rest : 0-700(mm) Max. Straining speed at No. Load : 150(mm / min) Pair of compression plates dia 120 mm For Tension Test Jaws: Round specimen dia 10-20 mm Round specimen dia 20-30 mm Flat specimen thickness 0-10 mm Flat specimen thickness 10-20 mm Max. width for flat specimen 50 mm For Transverse Test:

Sl. No.	List of items	Specification
		Adjustable Roller Support of width approx. 150 mm Adjustable Roller Support of dia. approx. 30 mm With max adjustable clearance approx. 500 mm RS232 Serial Port/Data Cable Standard Accessories Optional Accessories: Extensometer Load rate Control Load rate stabilizers Flat Belt test Bolt nut and Washer test Single and double shear test Tensile test for shouldered and threaded Bend Re-bend test
7.	Point Load Testing Apparatus	Point Load Test Apparatus of load frame 60 kN capacity with a hydraulic loading ram actuated by a hand pump. The frame may be adjustable to allow for testing samples up to 102 mm dia. A ruler assembled on the frame allows for direct measurement of the distance between the conical platens before and after the test. The compression load is measured by a pressure transducer with an advanced digital display unit assuring the best accuracy and resistance to the failure shocks. The machine, fitted with the set of lower and upper platen of at least 52 mm dia with spherical seat for compression tests, can also be used for compression tests on small cores or cylindrical specimens. The apparatus is contained in an easily transportable case.
8.	Anchorage Testing m/c	For testing for roof bolts anchorage strength in underground mines for a height roof of upto 5 meters. Weight: Maximum 18-20 Kgs for 10-12 T Capacities. Equipment can be accommodated in a Bog/Box. Hoses: 6 meters, Working Pressure-700 Bar, Testing Pressure Bar, Burst Pressure: 2800 Bar; Make: Thermo Plastic. Bridge: To support in between Roof & ATM Jack, Provide with no of slots for better observation, along with bearing plates on both the sides. Indicator Gauge: Show Hydraulic Pressure directly calibrated to tones with a least count of 0.5 tons to 1 tones, along with gauge. Hydraulic Oil: Recommended one Like Indian Oil SS46/48. CMRI Test Certificate for Anchorage testing Machine and with Operation & Maintenance manuals provided.

Sl. No.	List of items	Specification
9.	Strain Gauge	<p>Key Features Measurement of 120 ohm resistive strain gauges in quarter bridge configuration</p> <p>Liquid Crystal Display giving microstrain units with a range of +/- 18,000</p> <p>Rechargeable Nickel-Metal Hydride battery</p> <p>Ability to read up to 18 strain gauges automatically</p> <p>Hand-held graphite filled glass fibre antistatic case with shoulder strap</p> <p>Specification Display: high visibility 8 character numeric Liquid Crystal Display. Powerpack: 12v NiMH rechargeable batteries providing over 8 hours continuous use. Temperature Range: 0 to +50°C operating temperature; -20 to + 50° C transport and storage temperature. Excitation Voltage: 2.5V. .</p> <p>Accessories Included with the SM02 unit is: Multi-voltage a.c. "intelligent" battery charger; User manual and plasticised instruction sheet; USB cable and drivers for PC interface; and Exbolt for Windows software package including manual.</p>



Government Polytechnic, Bhaga, Dhanbad

Earlier known as Mining Institute, Bhaga

(Department of Higher, Technical & Skill Development, Government of Jharkhand)

(BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad- 828120)

Email: gpbhaga@gmail.com

: List of Equipment Mining Geology :

Sl. No.	Name of Item	Specification																																
1.	Brunton Compass	<p>Vertical angle measurements to +/- 90° or 100% grades A percent grade scale with increments of 5% Induction dampened needle for quick, accurate readings Sapphire jewel bearing allows for smooth needle movement Magnetic declination adjustments allows for east or west declination settings to +/- 180° Short and long sights for increased accuracy when sighting azimuth or vertical angles Precision aligned mirror with convenient "see-through" sighting capability Composite body material has less thermal retention Ball & socket tripod mount for increased accuracy O-rings make the Com Pro waterproof for increased reliability Male of body- Aluminum Leather case included</p>																																
2.	Zoom binocular microscope	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: black; color: white;">Specifications</th> </tr> </thead> <tbody> <tr> <td>Microscope Body</td> <td>Binocular</td> </tr> <tr> <td>Standard Zoom</td> <td>6.7x-45x with 10x eye pieces included</td> </tr> <tr> <td>Standard Field of View</td> <td>32.8mm to 4.9mm</td> </tr> <tr> <td>Standard Working Distance</td> <td>100mm (3.93")</td> </tr> <tr> <td>Optional Zoom</td> <td>2x-270x with optional lenses</td> </tr> <tr> <td>Working Distance</td> <td>26mm-287mm</td> </tr> <tr> <td>Field of View</td> <td>1mm-109.5mm with optional lenses</td> </tr> <tr> <td>Zoom Body</td> <td>0.67x-4.5x</td> </tr> <tr> <td>Zoom Ratio</td> <td>1:6.7</td> </tr> <tr> <td>Interpupillary Adjustment</td> <td>52mm-75mm</td> </tr> <tr> <td>Eyepiece Inclination</td> <td>45° and 60° 20° rotatable microscope head</td> </tr> <tr> <td>Eyepiece Diopter Correction</td> <td>±5 Diopter</td> </tr> <tr> <td>Optional eyepieces</td> <td>10X, 15X, 20X, 25X and 30X</td> </tr> <tr> <td>Optional Auxiliary Lenses</td> <td>0.3X, 0.5X, 0.75X, 1.5X and 2.0X</td> </tr> <tr> <td>Stand with focus block</td> <td> Post stand Track stand Back Lighting Stand Boom Stand Double Barrel Boom Stand Articulating Arm Stand </td> </tr> </tbody> </table>	Specifications		Microscope Body	Binocular	Standard Zoom	6.7x-45x with 10x eye pieces included	Standard Field of View	32.8mm to 4.9mm	Standard Working Distance	100mm (3.93")	Optional Zoom	2x-270x with optional lenses	Working Distance	26mm-287mm	Field of View	1mm-109.5mm with optional lenses	Zoom Body	0.67x-4.5x	Zoom Ratio	1:6.7	Interpupillary Adjustment	52mm-75mm	Eyepiece Inclination	45° and 60° 20° rotatable microscope head	Eyepiece Diopter Correction	±5 Diopter	Optional eyepieces	10X, 15X, 20X, 25X and 30X	Optional Auxiliary Lenses	0.3X, 0.5X, 0.75X, 1.5X and 2.0X	Stand with focus block	Post stand Track stand Back Lighting Stand Boom Stand Double Barrel Boom Stand Articulating Arm Stand
Specifications																																		
Microscope Body	Binocular																																	
Standard Zoom	6.7x-45x with 10x eye pieces included																																	
Standard Field of View	32.8mm to 4.9mm																																	
Standard Working Distance	100mm (3.93")																																	
Optional Zoom	2x-270x with optional lenses																																	
Working Distance	26mm-287mm																																	
Field of View	1mm-109.5mm with optional lenses																																	
Zoom Body	0.67x-4.5x																																	
Zoom Ratio	1:6.7																																	
Interpupillary Adjustment	52mm-75mm																																	
Eyepiece Inclination	45° and 60° 20° rotatable microscope head																																	
Eyepiece Diopter Correction	±5 Diopter																																	
Optional eyepieces	10X, 15X, 20X, 25X and 30X																																	
Optional Auxiliary Lenses	0.3X, 0.5X, 0.75X, 1.5X and 2.0X																																	
Stand with focus block	Post stand Track stand Back Lighting Stand Boom Stand Double Barrel Boom Stand Articulating Arm Stand																																	
3.	Petrological Micro scope.	<ol style="list-style-type: none"> 1. Stand with 4/5 position centrable Nose piece 2. Microscope frame for polarizing microscopy with circular rotatable graduated stage, including centring knob (1 pair) and stage clip U-SCB2 (1 pair) with condenser & Polarizer 3. Trinocular tube, fixed light pass, Bi/Photo: 50/50, Wide field eyepiece Light Balancing day light filter, 30W LED/Halogen bulb, Power cord, Dust cover. 4. Attachable mechanical stage, graduated for Circular Stage. 5. Polarizing Objectives :- Achromat polarising objective 10X/0.25, WD 6 mm Achromat polarising objective 4X/0.1, WD 18.5 mm 																																

Sl. No.	Name of Item	Specification
		<p>Achromat polarising objective 20X/0.4, WD 3 mm Achromat polarising objective 40X/0.65, WD 0.45mm (spring) Achromat polarising objective 40X/0.65, WD 0.45mm (spring)</p> <p>6. Microscopic Digital Camera - High resolution Digital Camera with ½"CMOS chip USB 2.0 PC connection, Minimum Image resolution: Minimum 3.3 mega pixels, 2048 x 1536 pixels, 16mm lens Macro viewing tube, Calibration slide and Microscope eyepiece adapters, ROI (Region of Interest) from 1x1 pixels up to full resolution, continuously variable in single-pixel increments, Frame Speed of 30fps full field of view (higher fps with ROI functions) and necessary C mount adapter.</p> <p>7. Software (Optional): Image analysis Software for Measurements, EFI, Morphometry Analysis, AVI recording, Annotations, Advanced acquisition Control Snapshot, Time lapse and should be capable of driving the camera for capture of Images in Real Time, Magnifier (zoom) function, Distant Image Sharing, Data Export, Interactive File Format. [Please mentioned the price of software in separate sheet] Optional: Related optional accessories can also be quoted.</p>
4.	Hardness Pencil for moh's scale of hardness	Made of Sharp edge of minerals having hardness from 1 to 10 in form of pencil.
5.	Hardness Box	Minerals having hardness 1 – 10 as scaled by moh's
6.	Rock Hand Specimen	Basalt gobbro, Norites, Trctolites, Anorthosite, Pyroxenites, Diorites Monzonites, Syenites, Granites, Syenite, granites granodiorites, tonalities, Peridotites, sandstone, limestone, greywacke, arkosic sandstone lithic sandstone, dolomite, chert, porcellanite, glauconite, ironstones, slates, phyllites, schists, gneiss, granulites, amphibolites, quartirites, Marbles, eclogites, augen gnejses.
7.	IUGS/ Double triangle classification of ignous rock	All rocks must be kept in wooden box, frame according to IUGS/ Double triangle classification. Wooden box must be covered with 4 mm transparent fiber plate. Facility to hang on wall.
8.	Bowens reaction table	All rocks must be kept in wooden box, frame according to Bowens reaction principle. Wooden box must be covered with 4 mm transparent fiber plate. Facility to hang on wall.
9.	Laser distance meter	<ol style="list-style-type: none"> 1. Measuring accuracy range +_ 1.5 mm to Capable to measure distance upto 100 mm. 2. Measuring units m, ft, in 3. Tilt measuring range +_ 45 or 360° 4. With software and stand (Tripod) and all accessories with area, volume measurement, Pythagoras functions.
10.	Magnifying Lens.	Hand lens and Jewelers Loupe, with a 10x magnification and a diameter of 18mm. Viewing field. 10x magnification Diameter of 18mm Chrome plated lens Plastic weather resistant case
11.	Geological Hammer	Bonded and molded Shock Reduction Grip which offers the utmost in both comfort and durability, while reducing vibrations caused by impact. The head and handle are forged in one piece and have a fully polished head.Weight-22 oz / 616 g Overall Length= 13" / 330 mm



Government Polytechnic, Bhaga, Dhanbad

Earlier known as Mining Institute, Bhaga

(Department of Higher, Technical & Skill Development, Government of Jharkhand)

(BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad- 828120)

Email: gpbhaga@gmail.com

: List Equipment of Survey Lab :

Sl. No.	Name of Item	Specification
1.	Digital Planimeter	Type: Roller Type With Computing Function: Single Function Display: Liquid Crystal Symbol: Batt-E,SCALE MEMO,HOLD cm ² ,m ² , km ² ,in ² , ft ² ,acre,etc. Converting Function: Unit and Scale value Accumulated Measuring Value: Maximum 10m ² (Scale 1:1) Measuring Range: Maximum vertical width: 325mm Horizontal roller rotating length: 30m Power Supply: Built-in NiCd Battery(rechargeable through AC Adapter) AC Adapter 100-240V (Auto-power-off function is provided.)
2.	Laser 3D	Measuring accuracy (favorable conditions): 1.0mm / ± 0.09 in Smart Base vertical range: -40° to 80° Smart Base vertical sensor tolerance: up to +/- 0.2° Smart Base horizontal range: 360° Smart Base horizontal tolerance: up to +/- 0.2° Tolerance P2P function at distances (combination of sensors and distance measuring): approx. : +/- 2 mm / 2 m +/- 5 mm / 5 m +/- 10 mm /10 m X-Range Technology: Yes Point finder with 3x-4x zoom: Yes Overview camera: Yes File format: .jpg / .dxf Memory: Last 30 displays Windows Software: competent with AutoCAD® plug in Free App: iOS / Android Data interface: Bluetooth® V4.0 Smart / WLAN / USB Measurements per set of batteries: ~ 400 Batteries: Li-ion rechargeable With Tripod & all accessories.
3.	Laser line	Range: up to 40 ft or higher. Leveling accuracy @ 16 ft: ± 1/16" Self-leveling range: 4° ± 0.8° Accuracy of plumb point @ 16 ft: ± 1/16" Number of laser points: 3 Beam direction: up, down, forward Laser type: 635 nm, laser class II With Tripod & all accessories.
4.	Laser line	Range: up to 50 ft or higher. Range with detector: > 90 ft or higher. Leveling accuracy @ 16 ft: ± 1/16" Self-leveling range: 4° ± 0.8° Accuracy of horizontal line @ 16 ft: ± 1/16" Vertical accuracy @ 10 ftline length: ± 1/40" Number of laser lines: 2

Sl. No.	Name of Item	Specification
		Beam direction: vertical, horizontal Laser type: 635 nm, laser class II Batteries: type AA 3 × 1.5 With Tripod & all accessories.
5.	Laser distance meter	Measuring units: mm, m, ft, in, Power Range Technology: Yes Point finder with 4x zoom: Yes Overview camera: Yes Photograph file format: jpg Memory: Last 20 displays Windows Software: Competent with AutoCAD® plug in Free App: iOS / Android Data interface*: Bluetooth® V4.0 Smart Multifunctional end-piece: Automatic recognition of measurement position Batteries: Li-ion rechargeable With Tripod & all accessories. Protection class: IP 54 - splash water/ dust
6.	GPS System	Sensor type.L1/G1 GNSS receiver and antenna Systems. GPS, GLONASS, Galileo, Beidou, QZSS Channels.44-channel, parallel tracking Correction sources.SBAS, View Point RTX, QZSS, VRS SBAS. 4-channel, parallel tracking WAAS, EGNOS, MSAS, GAGAN, SBAS ranging Receiver protocols. NMEA 0183 v4.00, Binary Update rate 1 Hz Time to first fix. 45s typically Reacquisition. . < 2s Real time correction protocols CMR, CMR+, CMRx RTCM 2.1, 2.2, 2.3, 3.0, 3.1 SBAS accuracy1 < 80 cm View Point RTX1 50 cm HRMS Code DGNSS accuracy (real-time)1 75 cm + 5 ppm HRMS Maximum speed.1,850 kph / 1,150 mph / 999 knots Maximum altitude.9,000 m (29,520 ft)
7.	Hand Held GPS	Processor: 416 MHz Intel PXA-270 X-Scale Memory: 64 MB RAM and 512 MB internal Flash disk Battery: Internal 6800 mAh lithium-ion rechargeable in unit 25 Watt-hours Channels: 12 Accuracy: 1 mtr. Real time Display: Touch screen, Soft Input Panel (SIP) virtual keyboard
8.	Total Station	DESCRIPTION 5" DR TOTAL STATION with GRAPHIC LCD DISPLAY with 25 Alpha numeric keys and/ or touch screen interfaces. Accuracy : 5" Least Count : 1" Dual Axis Compensator: +/- 5' Range without Reflector : 100 or higher m. Range with Single Prism : 1000 M or higher. Distance accuracy with Prism : Distance accuracy without Prism : 3mm+ -7 ppm Internal Memory: 2, 000 to 5,000 points. On Board Programmes includes : - Known Station, Resection, Stake out, Station Elevation, Measure Topo, Ref Line 2D, Div. Line 2D, Eccentric point, Remote Object, Connecting distance (Radial/Polygonal), Station & Offset, Vertical Plane & Computation Area. With Transport case, User manual, Data downloading software. Downloading & Post Processing software : FIELD DATA MODULE. FEATURES: - Downloading & Uploading data, Traverse Adjustments & RL Adjustments, Automated Drafting, Calculation for Area & Perimeter, Volume Calculation, Export of the drawing file to ASCII points, Export of the drawing file to AutoCAD, 3D View, touch screen facilities. ACCESSORIES : Internal Battery: 3 No. Data downloading cable: 2 No. Single Circular Prism: 2 No. High Precision Mini Prism with pole: 2 No. Graduated Telescopic Range Pole: 2 No. Tripod: 2 No.



Government Polytechnic, Bhaga, Dhanbad

Earlier known as Mining Institute, Bhaga

(Department of Higher, Technical & Skill Development, Government of Jharkhand)

(BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad- 828120)

Email: gpbhaga@gmail.com

Chemistry Lab

Sl. No.	List of items	Specification
1.	PH Meter	<p>Operating Ranges pH : 0.00 to 14.00, MV : ± 1999, Temp : 0 to 100DegC, Resolution pH : 0.01, MV : 1 , Relative Accuracy pH : ± 0.01, mV : ± 1, Temp : ± 1 DegC, ± 1 least significant digit, pH Calibration 2 point 4 & 7 buffer, Temperature Compensation 0 to 100DegC, Manual, 7-Segment Display, Input Conditions Impedance greater than 1012 ohms , Operating temperature: 5 to 40DegC, Operating humidity: max 80% at 35DegC (non condensing), The 220 is supplied with an appropriate power supply unit with sensor & accessories.</p>
2.	Conductivity Meter	<p>Range 0 to 20, 200 μS Readability 0.05 % of Range Accuracy $\pm 1\%$ of Range Repeatability $\pm 1\%$ of Range Readout $3\frac{1}{2}$ digit 7 segment LED of . 12.7mm height . OUTPUT 20 mV Full Scale into 10 kΩ Resistive Impedance. Cell: Dip type Conductivity cells of cell constants 0.1, 0.5 and 1.0 Power: 230 V $\pm 10\%$ AC, 50 Hz, 1ϕ, 5 VA Max. Cell Constant: 0.1, 0.5 or 1.0 (Selectable) TEMP. CO-EFFICIENT 2% with sensor & accessories.</p>
3.	TDS Meter	<p>Range 0 to 200 mS (EC) 1 ppm to 100 ppt (TDS) Resolution 0.05% of range (EC) Accuracy 1% of range Readout 2 line 16 Character Dot . matrix Backlit LCD . Sensor: Module Dip type Conductivity cell of Cell Constants 0.1, 0.5 and 1.0 Power: 90-260 V AC, 50-60 Hz, 1ϕ, 9 VA Max. Temp. Compensation: 0 to 50°C Auto/Manual</p>
4.	Flame Photo Meter (Microprocessor Based)	<p>Microprocessor based Printer Interface Automatic ignition Automatic gas shut off Calibration curve maximum of 5 to 10 standards or higher. Storage for 100 to 700 samples</p>

Sl. No.	List of items	Specification	
		Optional PC compatibility with RS232C Interface with all accessories.	
		RANGE	
		Sodium (Na)	1-100 ppm 0-200 mEq
		Potassium (K)	1-100 ppm 0-100 mEq
		Lithium (Li)	1-100 ppm 0-10 mEq
		Calcium (Ca)	15-100 ppm 0-5 mEq
		Barium (Ba)	50-1000 ppm
5.	Spectrophotometer (Microprocessor Based)	SPECTRAL	
		Range	190 to 1100 nm
		Bandwidth	2 nm
		Readability	0.1 nm
		Accuracy	± 0.5 nm
		Repeatability	± 0.2 nm
		PHOTOMETRIC	
		Range	± 2.500 Abs
		Accuracy	± 0.005 Abs at 1.0 Abs
			± 0.010 Abs at 1.5 Abs
		Repeatability	± 0.003 Abs at 1.0 Abs
		Stability (Baseline)	± 0.003 Abs/hr. after 2 hour warm up
		Stray Light	<1% T at 200 nm with KCl 12g/L
			<1% T at 220 nm with NaI 10g/L
		Readability	%T 0.01
			Abs 0.0001



Government Polytechnic, Bhaga, Dhanbad

Earlier known as Mining Institute, Bhaga

(Department of Higher, Technical & Skill Development, Government of Jharkhand)

(BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad- 828120)

Email: gpbhaga@gmail.com

List Equipment of Gas Testing Lab:

Department of Mining Engineering

Sl. No.	Name of Item	Specification
1.	METHANE GAS TESTING CHAMBER	METHANE GAS TESTING CHAMBER having robust construction with Teak Wood consisting of clear glass in all four sides to have a clear view for 3-4 trainees at a time. Size: Length-12" Breadth-12" Height-18" (Leg attached with best quality rubber buffer). Comprised with LP Gas Cylinder, Gas Pipe, Regulator, Gas Socket a complete Gas Cap Indicator Wooden Box Including 1 No. Velox GL7 Gas Testing Flame Safety Lamp.[Including installation charges]
2.	Accessories for Gas Testing Chamber.	Gasket -20 Nos. Wick- 13 mtr. Inner Gauge- 05 Pc Outer Gauge- 05 Pc Glass Seat- 05 Pc Snuffer Tube Device (Extinguisher)- 02 Pc Fuel Vessel (Oil Pot) With Snuffer Tube Device (Extinguisher)- 02 Pc Double skinned shield with frame- 02 Pc Glass Cylinder- 05 Pc
3.	Multi Gas Detector	DGMS Approved- Make: Industrial Scientific Corporation, USA Model: VENTIS MX4 with pump for detection of LEL (methane) oxygen, carbon monoxide and hydrogen sulphide.
4.	Multi Gas Detector	DGMS Approved- Portable Multi Gas Detector Gas Alert MICROCLIP XT (Oxymeter, Toximeter, Methanometer and H2S gas Detector) can be used as single gas detector model MC-XWHM-B-OE fitted with Auxiliary filter kit model MC-AF-K1 for detection of Co, O2, H2S and combustible gases.
5.	Gas Detector	DGMS Approved- MAKE: MSA Ultima Gas Detector (IR/Catalytic type) to be used as LMD in Coal Mines
6.	Dust Sampler	DGMS Approved- MAKE: SEPL Personal Dust Sampler model Side Kick-51MTX with NiMH battery pack
7.	Cap Lamp	DGMS Approved- MAKE: EXIDE Oldham GT. Type Cap lamp (Also used 4v/1A bulb)
8.	Flame Safety lamp	DGMS Approved- MAKE: JK DEY Velox GL-50 Type –Flame Safety lamp with snuffer device
9.	Flame Safety	DGMS Approved-

Sl. No.	Name of Item	Specification
	lamp	MAKE: JK DEY Velox GL-7
10.	Magnetic unlocker for Flame Safety Lamp	Magnetic unlocker for Flame Safety Lamp Model: GL 50 & Other Model of Velox.
11.	Coal Dust Explosibility Meter	DGMS Approved- Model – CDEM-1000 Coal Dust Explosibility Meter,
12.	Methanometer	DGMS Approved- Model – CDEM-1000 Methanometer (Telegas 1000 AR)
13.	Noise Dosi Meter	DGMS Approved- Noise Dosi Meter model Noise Pro DLX for use in Underground & Open Cast Coal Mines
14.	Environmental Monitoring System	DGMS Approved- MAKE: Viswa Microprocessor. Approval to use Programmable sensor controller TX-9042, single port repeater TX-2122.56 and multi port repeater TX-2122.57 alongwith single port isolator TX- 2121 with Environmental Monitoring System.



Government Polytechnic, Bhaga, Dhanbad

Earlier known as Mining Institute, Bhaga

(Department of Higher, Technical & Skill Development, Government of Jharkhand)

(BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad- 828120)

Email: gpbhaga@gmail.com

Tender Invitation Notice- 02-130817

GENERAL TERMS AND CONDITIONS

1. Tender must be sent by Regd AD post/speed post/hand to hand to
Principal, Govt. Polytechnic Bhaga, Dhanbad (BIT Sindri Campus, PO: Motinagar, Dist: Dhanbad, Jharkhand-828120)
Tender documents must be placed in a **big envelope (keep commercial envelop and price envelop inside of this envelop)** securely fastened, sealed and distinctly marked TENDER FOR Lab Equipment/Instrument. **Tender Adv. No. Tender Invitation Notice- 02-130817** and due date and time of opening must be marked boldly on the envelope.

Last Date of Submission of Tender: 12-09-2018

Date of Opening Tender: 13-09-2017 at 1.00 p.m.

2. Tender must be submitted in two envelop. 1st Envelop will be for commercial paper & specification of item and 2nd Envelop will be for only price. Envelope containing commercial paper will be first open for selection of qualifying tenderer. After finalizing of qualifying bidder, on the basis of document related to techno commercial aspect, price bid envelop will be open for generation of comparative chart of price. All envelop must be properly sealed.
3. Unsolicited quotations/quotation received late or improperly sealed or with incomplete marking or with unattested overwriting/corrections in the quotation documents are liable to be rejected.
4. Items supplied are subject to inspection and acceptance and the supplier should collect rejected items at his cost.
5. RATE Validity: 120 days from the date of opening.
6. Warranty: One Year.
7. Tender may be cancelled without showing any reason in unavoidable situation.
8. All the information regarding this tender may be obtained from official website www.gpbhaga.com of this institute. Please visit regularly our website for any update of tender. Date of opening may be changed. The information of change of date of opening will be displayed on the website of the office under the title of **notice**.

9. Principal reserves the right to call negotiations. The company should depute competent representative for such discussion/negotiations whenever called for and he shall be competent to take on the spot decisions.
10. Principal reserves the rights to place order for full quantity or part thereof as considered necessary.
11. Price indicated in the schedule shall be F.O.R. Prices should be inclusive or exclusive of all taxes Bidder must mention clearly the applicable rate of taxes.
12. The bidder must have to submit attested copy of following documents.
 - a. Approval of DGMS [if applicable]
 - b. Specification of items with comparison of institute specification as given below. Fill the following table.

Sl. No.	List of items	Specification	Specification (Given by Tenderer) with Make & Model No.	Deviation (if any) From Institute Specification

- c. Registration of firm / GST
- d. PAN No.
- e. TDS [last two financial year]
- f. Authorization certificate from manufactures / item dealer / agency
- g. Past experience of supplying of items.
- h. Leaflet of item [if available]

All above certificates must be enclosed in commercial envelop

Price with specification of Equipment must be kept in separate envelop.

Note: Training for Operation of equipment will be provided by the firm on his own cost.