



# भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद

धनबाद, झारखण्ड, भारत, पिन-826004

(मानव संसाधन विकास मंत्रालय, भारत सरकार के अधीन राष्ट्रीय महत्व का एक संस्थान)

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD

DHANBAD, JHARKHAND, INDIA, PIN-826004

(An Institute of National Importance under Ministry of H.R.D., Govt. of India)

STORES & PURCHASE SECTION Phone:(0326) 2235678 || Email : purchase@iitism.ac.in || Website : www.iitism.ac.in

NIT No. AGL-PRJ-285-2018-19

Date: 29<sup>th</sup> October, 2018

## NOTICE INVITING TENDER

### Subject: Supply and Installation of TOC Analyzer.

Indian Institute of Technology (Indian School of Mines), Dhanbad invites quotations for the following to be supplied and delivered in AGL Department.

Sl. No.	Description of Materials	Unit	Quantity
01.	<b>Supply and Installation of TOC Analyzer</b> (Specification attached at Annexure – II)	Nos	<b>01</b>

### Tender Schedule

Particulars	Date & Time
Tender Cost (Online Payment)	<b>Rs. 590.00 (Rupees Five Hundred Ninety only)</b> (Please refer Point No. 10 of Terms & Conditions)
Bid Security or Earnest Money Deposit	<b>Rs. 18,000.00 (Rupees Eighteen Thousand only)</b>
Last date and time for submission of tenders	<b>20.11.2018 at 3:00 P.M.</b>
Date and time of opening of tenders	<b>20.11.2018 at 4.00 P.M.</b>

1. You are requested to quote your lowest rates for the supply of above items in the attached format for Financial Bid (Annexure – I)
2. Clarification(s) sought after the prescribed date shall not be entertained.
3. You may send your representative in the office of the undersigned at the scheduled date and time of opening of tender.
4. Tender should be submitted in sealed cover only superscribed with Enquiry No. and due date at the following address only:

**The Deputy Registrar (P&S)**  
Indian Institute of Technology (Indian School of Mines),  
Dhanbad – 826 004, Jharkhand

### Terms & Conditions

- 1) The rates should be quoted for each item separately.
- 2) Conditional offer will not be accepted.
- 3) IIT (ISM) Dhanbad does not issue any Form 'C' or 'D' towards sales tax concessional rate. Hence, full rate of GST applicable should be quoted.
- 4) **Educational discount**, if any, should be clearly mentioned.
- 5) You are requested to submit your quotation strictly as per the specifications mentioned in the NIT.
- 6) Your tender must be valid for **minimum 90 days** from the date of opening of tender.
- 7) Please mention warranty/ guarantee in your offer clearly. Material/ equipment to be supplied must have minimum warranty/guarantee of **as per the specification attached as Annexure II**.
- 8) Each page in the bid document must be numbered properly and duly signed & sealed by the bidder on every page of the bid.
- 9) **The items/ materials shall be required to be delivered at AGL Department/ Section through Purchase & Store Section, IIT (ISM) Dhanbad at the risk and cost of the tenderer.**



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- 10) Venders must pay the Tender Cost through the Link <http://www.onlinesbi.com/prelogin/collecthome.htm?corpID=272342> . Cash receipt should be attached along with the bid submitted.
- 11) **Bid Security or Earnest Money Deposit (EMD):** Should be submitted in form of A/C payee demand draft drawn in favor of Registrar, IIT (ISM), Dhanbad and payable at Dhanbad.
- 12) Unloading and installation shall be the complete responsibility of the supplier.
- 13) The stores are required to be delivered within 30 days. Late delivery may not be accepted.
- 14) The items offered should be of good quality confirming to BIS standards, wherever applicable.
- 15) **Advance payment is not admissible.** Payment shall normally be made within 3-4 weeks subject to receipt and acceptance & installation (as per Purchase Order Terms) of the ordered materials/items.
- 16) In the event date on which the tender is opened for acceptance is declared to be a holiday, the tenders shall be deemed to remain open for acceptance till the next working day. IIT(ISM) Dhanbad may extend the date and time for submission opening of the bids.
- 17) Please send your offer by Regd.Post/ Speed Post/ Courier along with Courier receipt. Tender/ quotation will be received during IIT (ISM) Dhanbad working hours only (i.e. Monday to Friday). *Late or delayed tenders shall be summarily rejected.*
- 18) Successful bidders will have to submit Performance Bank Guarantee (PBG) as per the Purchase Order.
- 19) Any other information that you may like to obtain, you are free to contact IIT (ISM) Dhanbad before submission of tender.
- 20) IIT (ISM) Dhanbad reserves the right to accept and/or to reject any/ all tenders without assigning any reason.

Assistant Registrar



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## Annexure - I

### Format for Financial Bid

NIT No.: AGL-PRJ-285-2018-19

Dated: 29.10.2018

Bidder's Reference No.

Dated:

GSTIN:

**Subject: Supply and Installation of TOC Analyzer.**

Sl. No.	Full Description of Items (With HSN Code/ SAC Code)	Qty.	Rate	Amount
			Packing & Forwarding (if any)	
			<b>Total</b>	
			GST(if any)	
			Freight (if any)	
			Installation (if any)	
	Amount should be in figure as well as word		<b>Grand Total</b>	

### **Note:**

- 1) All the details must be provided as per prescribed format only
- 2) Prices quoted by the bidders should include GST, HSN Code, SAC Code, duties, livies, transportation cost and insurance costs etc. if any

## Annexure - II

### Specifications for One “TOC Analyzer”

1. **Specifications Sheet:** The minimum specifications and quantity for “**Total Organic Carbon (TOC) Analyzer**” is given in the **Table 1**.
2. **TOC Analyzer:** The specifications for the complete “**TOC Analyzer**” is listed in the Table 1 (given below). *A certificate is required from the original equipment manufacturer (OEM) that their equipment and accessories meet all minimum specifications as given in the Table 1.*
3. **Accessories:** All necessary accessories and software’s, required for the smooth operation of the **TOC Analyzer** in the laboratory, should be delivered by the supplier along with the data acquisition, retrieval and analysis system and power backup. All accessories, and components including cables, batteries etc. should be Original Equipment Manufacturer (OEM) make/supplied directly by OEM and certified by OEM for smooth functioning. *List of all accessories, with part(s) number(s), to be supplied by the OEM is required.*
4. **Specification sheet(s), product brochure(s), and Manual(s):** Printed copy of all the specification sheets, product brochures/manuals related to TOC Analyzer System including measurement/methodology should be supplied along with the quote. *Soft copy of these documents must be provided in a CD/DVD/USB pendrive.*
5. **Warranty:** Total cost of supply must include 3 (three) year onsite comprehensive warranty including technical support for all equipment, accessories and softwares (within 5 business day support). The cost of repair/replacement/shipping, if any, should be borne by the supplier during the warranty period. *A three-year onsite comprehensive warranty certificate including technical support is required from the OEM for TOC Analyzer.*  
*For Data Acquisition Unit/ Data Analysis Unit / Digital micro balance/ UPS Unit/Battery Unit, separate warranty certificate(s) should be obtained and enclosed from respective OEMs/suppliers.*  
*In case the local representative of the OEM/Principal Company changes or withdraws; a letter of assurance by the OEM/Principal Company is required stating that they will directly cover the warranty and service the equipment as and when required as per the terms and conditions mentioned in this document.*
6. **Standardization & Calibration:** *Certificate from OEM is required as mentioned in Table 3.*
7. **Additional Warranty (Optional):** The cost of annual “comprehensive maintenance contract (CMC)” should be provided **separately** for extension of warranty for additional 5 years, on a year-wise basis (for 4<sup>th</sup> year, 5<sup>th</sup> year, 6<sup>th</sup> year, 7<sup>th</sup> year, and 8<sup>th</sup> year), which is beyond the normal 3-year warranty (1<sup>st</sup> year, 2<sup>nd</sup> year and 3<sup>rd</sup> year) period stated above.
8. **Installation and Demonstration/Training (free of cost):** Onsite installation, testing and demonstration/training of the equipment, accessories and associated data processing software, by professional person(s) as mentioned in Table 1.
9. **Supply:** Price should be quoted on **FOR, Dhanbad** basis in case of Indigenous supply and **FOR, Dhanbad/CIP Kolkata** in case of foreign supply.
10. **Total Cost:** Total cost of the equipment should be quoted in INR in case of Indigenous supply and in Foreign Currency in case of Foreign Supply (Imported Equipment from OEM).
11. **Academic/Educational Discount:** Academic/Educational Discount and any other discount, if offered, should be clearly mentioned.
12. **Important Note:** The Quote should cover all the minimum specifications (as given in the **Table 1**) necessarily. Any **additional feature** provided along with the **TOC Analyzer** and included in the total cost (other than the items listed separately as optional) of the equipment will not add any further preference for considering the quote favorably. However, if the quote is considered, as per IIT(ISM)

Dhanbad purchase rules, the vendor has to retain all the features (including additional features listed as a part of the total cost of the equipment) intact as per the original quotation.

- **Thus, the cost of “additional” components, accessories, software’s and features, which are part of the standard system and required for complete operation of the TOC Analyzer system must be listed in Table 1.**

- 13. Optional (Items/Accessories and Additional Features):** The cost of any additional accessories and features, which are optional in nature, may be listed separately in Table 2.
- 14. Shifting of instrument:** Equipment may be installed in a temporary location initially and may be shifted to a permanent location lateron. *The OEM, without any additional cost, must provide undertaking regarding shifting & reinstallation of the system by a professional team to a permanent location if requested by the Indenter/Project (Principal Investigator)/Co-investigator/Faculty-in-Charge. Damage during the shifting, if any, of the equipment must be the liability of the OEM.*
- 15.** The OEM should certify that the TOC Analyzer Configuration and Control is a fully integrated system and all other components/accessories are fully compatible.
- 16.** A guarantee should be given by OEM to supply all the parts, if required, for at least 10 years from the date of installation.
- 17.** All parts and accessories, which is necessary for full functioning of the TOC Analyzer must be supplied with the tendered/quoted item.
- 18. All the pages of the quote for tendered item, including brochures/flyers/OEM certificates/OEM certified list/any other page, should be numbered sequentially by OEM/Supplier. The relevant page number, that complies with the given specification(s) in Table 1 and 2, must be identified in the column (Specification is on Page No<sup>##</sup>) in Table 1 and 2.**
- 19. Shipping and Installation:** Within the given timeframe, as per terms and conditions mentioned in the purchase order.

**Table 1. Minimum specifications and quantity for TOC Analyzer.**

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
1.	<b>TOC Analyzer</b>	Multi-mode analyzer. For Total Organic Carbon (TOC), Total inorganic carbon (TIC), Total Carbon (TC), Non-purgeable organic carbon (NPOC)	<b>01</b>			
	(Type of samples for Analysis)					
	<b>a. Liquid</b>	Ultra pure water to waste water including sewage, industrial processed water, industrial waste water, lake and estuarine water, ground water				
	<b>b. Solid</b>	Solid samples with vary concentration of carbon content, soil, shale, sediments.				
2.	<b>Method</b>	Through chemical oxidation (persulphate				



Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
		method), or as well as high temperature dual pack advanced combustion techniques. Or other method as per USEPA/EU/USP/ASTM/ISO/BS/BSI/NIST <i>Or equivalent national/international standards (acceptable if it's up to the satisfaction of Purchase Advisory Committee, IIT(ISM) Dhanbad)</i>				
3.	<b>Standards</b>	USEPA/EU/USP/ASTM/ISO/BS/BSI/NIST <i>Or equivalent national/international standards (acceptable if it's up to the satisfaction of Purchase Advisory Committee, IIT(ISM) Dhanbad)</i>				
4.	<b>Range</b>	10 ppb - 30,000 ppm carbon or better				
5.	<b>Reproducibility</b>	50ppb or better (or 0.1% if carbon content content in the sample is above 1%)				
6.	<b>Calibration stability</b>	At least 30 days (Multi point Calibration)				
7.	<b>Sample injection</b>	For solid, 2mg to 100mg or above, For liquid 2 ml and higher.				
8.	<b>Data Acquisition Unit</b>	Stand alone, touch screen LCD or by PC (Desktop/Laptop/Workstation) with Display.				
9.	<b>Auto Sampler</b>	Auto Sampler should be quoted as standard with the system with minimum bench space with 30 vials minimum.	01			
10.	<b>Gas and Supplies for Operating</b>	Gas(es) with Cylinder(s), controller(s) & Regulator(s) with safety and purity certificate & minimum 3 years of operating supplies (at the rate of at least 1000 samples/year). Including all connectors and compatible with the system.	01 or as may be required			
11.	<b>Halide and moisture</b>	Halide and moisture scrubber must be	01 or as			

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
	<b>scrubber</b>	provided. Should be adequate for minimum 3 years of operation (at the rate of at least 1000 samples/year).	may be required			
<b>12.</b>	<b>Particle handling for solutes in liquid</b>	Must be at least 0.45 micron.				
<b>13.</b>	<b>Combustion temperature</b>	at least 650°C and preferable up to 950 °C.				
<b>14.</b>	<b>Data Acquisition Software</b>	Necessary software for data acquisition and interface with the equipment. Perpetual license. Software tools to support acquisition, analysis and storage in the standard file formats.	01 or as may be required			
	<b>a. Name of software, if any</b>	Name and latest version number.				
	<b>b. License count</b>	01 (One)				
	<b>c. License type</b>	Perpetual license.				
	<b>d. Basic Measurements</b>	Required				
	<b>e. Report generation</b>	i. Descriptive/Basic Statistics ii. Excel/Word/html report generation				
<b>15.</b>	<b>Data Acquisition Unit/ Data Analysis Unit (DAU)</b>	For data analysis, storage and report generation	<b>01</b>			
		Please mention make/OEM/Manufacturer <ul style="list-style-type: none"> <li>• name and</li> <li>• model number.</li> </ul>				
	<b>a. Processor</b>	Intel Xeon E5/E7 series or Intel Core i7/i9 Desktop/workstation Processor Series or <b>newer Intel series or equivalent AMD series</b>				
	<b>b. Processor (Core and Speed)</b>	<ul style="list-style-type: none"> <li>• 4 core (minimum) and</li> <li>• 2.8 GHz (minimum)</li> </ul>				
	<b>c. Motherboard</b>	<ul style="list-style-type: none"> <li>• Support for SATA III,</li> <li>• Support for DDR4 Memory (DDR4-2133MHz)</li> </ul>				
	<b>d. Hard Drive</b>	480/500GB SSD				

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
	<b>e. Additional Hard Drive</b>	Slot/space to add atleast one additional 4TB internal SATAIII HDD or higher storage capacity HDD.				
	<b>f. Video Card/Graphics Card</b>	Graphics Card 2GB or more				
	<b>g. Memory</b>	16 GB DDR4-2133MHz (minimum)				
	<b>h. Keyboard</b>	Keyboard (wired), full-size keyboard				
	<b>i. Mouse</b>	Laser Scroll USB (wired), minimum 100dpi				
	<b>j. Monitor</b>	<ul style="list-style-type: none"> <li>IPS LED Monitor</li> <li>Screen Size: between 26 to 32 inch</li> <li>Resolution (minimum): Full HD display or higher</li> <li>Brightness (nit) (minimum): 250</li> <li>Contrast Ratio: 10000000:1</li> <li>Response Time: 5ms (or lower)</li> <li>Viewing Angle: 170/170 (or higher)</li> <li>Color Depth: 16.7 million (or higher)</li> <li>HDMI: Yes</li> <li>Speakers: 5W×2 (<b>inbuilt or Soundbar</b>)</li> <li>Tilt: Yes</li> </ul>	<b>01</b>			
		Please mention make/OEM/Manufacturer <ul style="list-style-type: none"> <li>name and</li> <li>model number.</li> </ul>				
	<b>k. Optical Drive</b>	DVD+/-RW Drive				
	<b>l. Network Speed</b>	10/100/1000 (1Gbit) NIC				
	<b>m. Cabinet/Chassis Design</b>	Tower				
	<b>n. Operating System</b>	Windows 10 Pro 64bit, English or latest version.	<b>01</b>			
	<b>o. Microsoft Office Pro</b>	2019 version or latest version	<b>01</b>			
	<b>p. Internet Security (Antivirus with anti-maleware and firewall)</b>	3 years (Eset/McAfee/Norton/Avira/Kaspersky)	<b>01</b>			



Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
	q. Power Supply	≥300 Watt and ≥90% Efficiency				
	r. Standard Warranty (for Workstation unit only)	<b>Minimum 3 Yrs Next Business Day Onsite Service for workstation unit only</b>				
	s. Manufacturer/OEM of DAU/Desktop/workstation	Workstation should be from a reputed Original Equipment Manufacturer (OEM) having its own registered trademark such as Dell/HP/HCL/Fujitsu etc.				
	t. Printer	Multifunction B/W laser printer with scanner and copier.	<b>01</b>			
16.	Consumables	All consumables required for operation of the equipment during the three-year warranty period (atleast 1000 samples/year).  Provide list of consumables along with the quantity to be supplied with the equipment.	Provide list of quantity to be supplied.			
		<i>Space for list of consumables &amp; quantity, if any. Add additional rows below, if required.</i>				
17.	Certified Reference Material (CRM) / Certified Standards for Standardization/Calibration	All standards required for standardization/calibration of the equipment during the warranty period (atleast once/year or as requested by the Indentor/Faculty-in-Charge/Person-in-Charge).  <b>Provide list of standards along with the quantity to be supplied with the equipment.</b>				
	a. Potassium Hydrogen Thalate (>99.9%, 100g × 5 = 500g)		<b>01</b>			
	b. Anhydrous Dextrose		<b>01</b>			

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
	(glucose) (100g × 5 = 500g)					
	c. Sodium carbonate (100g × 5 = 500g)		01			
		<i>Space for list of consumables &amp; quantity, if any. Add additional rows below, if required.</i>				
18.	Glassware, filters, pipettes, glass fiber filter, halide scrubber/scrubber, flasks, vials, needles	For simultaneous preparation of 30 samples.  <b>Add list of glasswares, make, size, part no. and mention quantity to be supplied. Use extra rows, as may be required.</b>	List of quantity to be supplied for each item			
19.	Other essential consumables such as HCl.	For approximately 3000 samples.  <b>Add list, make, part no. and mention quantity to be supplied. Use extra rows, as may be required.</b>	List of quantity to be supplied for each item			
20.	Digital semi micro or micro balance Operation Control Weighing Range	Mettler or Sartorius semi micro or micro balance (digital). Capable of data transfer to PC.  Weighing Range: 200 g or more Resolution: 0.1 mg Linearity: ± 2 to 4 mg Minimum Weight = 2 mg Auto Calibration.	01			
21.	<b>Essential power supply unit, internal or external batteries, chargers, cables and operating manuals for power backup</b>	At least minimum number of units (batteries, chargers, cables etc.) required for the smooth operation of equipment in the laboratory should be part of the standard supply.	<b>01 or as required.</b>			

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
22.	Tool kit	Suitable and essential tool kits must be provided with the instrument for the required maintenance	01 or as required.			
23.	Hard boxes/containers	Adequate number of containers should be provided to house the equipment and accessories during transportation and storage.	01 or as required.			
24.	Operational Environment	Adequate inbuilt protection of equipment against water, sand and dust				
	a. Ambient Temperature during operation	+20°C to +40°C or wider range				
	b. Storage Temperature	+10°C to +60°C or wider range				
	c. Humidity	75% (preferably 95%) or higher				
25.	Power Backup Unit/UPS Unit	Sinewave 3 KVA (or more) UPS System with external lead-acid tubular batteries including onsite installation	01			
	a. UPS Unit (3 KVA or more)	Sinewave UPS Please mention make/OEM/Manufacturer <ul style="list-style-type: none"> <li>• name and</li> <li>• model number.</li> </ul>	01			
	i. Output Power Capacity	3000VA or more				
	ii. Output Voltage	220±10% V				
	iii. Efficiency at full load	Atleast 85%				
	iv. Input Voltage	Standard mode/range: 120 to 290 V and Narrow mode/range: 180 to 260 Volt				
	v. Output Waveform	Sinewave (UPS Mode)				
	vi. Input Connections	Hard Wire 3 Wire (1 PH+N+G)				
	vii. Input voltage for main operations	Single Phase UPS.				
	viii. Waveform Type	Sine wave (Output)				
	ix. LCD/LED Control Panel	Multi-function LCD (status and control console) Display/indicators for Mains/UPS ON,				

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
		Battery Charging, Overload, Battery Low, Fault				
	x. Switchover from Mains to UPS/UPS to Mains	Automatic				
	xi. UPS Transfer Time	≤ 15 msec (or lower)				
	xii. Auto Reset Feature	Yes				
	xiii. Battery Charging Current	~10±2 Amps or appropriate charging current to charge all the 12V lead-acid (150Ah each) tubular batteries connected to the sinewave UPS system.				
	xiv. Protection	<ul style="list-style-type: none"> <li>• UPS Overload protection (100%)</li> <li>• UPS Short circuit protection (250%)</li> <li>• Input over voltage protection (280/300V),</li> <li>• Input under voltage protection (100/120V),</li> <li>• Low battery &amp; battery over charge protection</li> </ul> Battery Deep Discharge protection				
	xv. Weight	Less than 80 Kg (for UPS unit)				
	b. Battery Unit and Volt (number of Batteries required for one Sinewave UPS Unit)	<ul style="list-style-type: none"> <li>• UPS Charging support for all (12V, 150 Ah each) lead-acid tubular batteries for UPS to function normally.</li> </ul>	<b>01 set.</b> List the number of batteries to be supplied along with V and Ah for each battery.			
		Please mention make/OEM/Manufacturer <ul style="list-style-type: none"> <li>• name and</li> <li>• model number.</li> </ul>				

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No##	Cost of part /module /item
	<b>c. Trolley</b>	<b>a.</b> Movable trolley with minimum four wheels/castors, metallic frame and legs, and table top (wooden/ply) for UPS	<b>01 or more as required</b>			
		<b>b.</b> Trolley/rack for holding Batteries.				
		<b>c.</b> Load Capacity: Atleast 50 Kg (each)				
		<b>d.</b> Battery size/holding capacity: Approx. 19×8.5×18 inches (L×B×H) to accommodate tubular lead-acid battery.				
	<b>d. Warranty (for UPS and Battery Units only)</b>	<b>Minimum 3 Years onsite Warranty for UPS and Battery unit only.</b> Next business day support.				
	<b>e. Manufacturer/OEM of UPS Unit/Battery Unit</b>	UPS/Batteries should be from a reputed Original Equipment Manufacturer (OEM) having its own registered trademark such as APC/Microtek/Exide/Luminous etc.				
<b>26.</b>	<b>Availability of Spares (Except DAU/UPS Unit/Battery Unit/Balance)</b>	The original equipment manufacturer (OEM) should confirm in writing that the spares for the quoted model will be available for a period of ten years after installation of the instrument. In case the OEM is bidding through an Indian agency/agent, the OEM should give a written undertaking that they will be responsible for providing all the spares as mentioned above, even if there is a change in the Indian agent/agency of the manufacturer.				
<b>27.</b>	<b>Technical Manual, Specification sheet(s) and product brochure(s)</b>	A set of technical manuals are to be supplied which shall cover the description, drawing, installation and commissioning guidance. Parts list and their identification, maintenance kit, instruction manual fault-diagnosing guidance also to be provided.	<b>01 set or as required.</b>			

Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
		<p>Printed copy of all the specification sheets, and product brochures/manuals related to <b>TOC Analyzer</b> should be supplied along with the quote.</p> <p>Also soft copy must be provided in a CD/DVD/USB pendrive.</p>				
28.	<b>Warranty</b>	Total cost of supply must include 3 (three) year onsite comprehensive warranty (for 1 <sup>st</sup> year, 2 <sup>nd</sup> year and 3 <sup>rd</sup> year since installation) including technical support for all equipment, modules, components, accessories and softwares (within 5 business day support). The cost of repair/replacement/shipping, if any, should be borne by the supplier during the warranty period.				
29.	<b>Installation &amp; Testing</b>	<ul style="list-style-type: none"> <li>Installation, Commissioning &amp; Testing of the Equipment and its accessories at site for acceptance.</li> </ul>				
		<ul style="list-style-type: none"> <li>Calibration Certificate: Equipment will be supplied with manufacturer's calibration certificate having reference to NIST or equivalent standard.</li> </ul>				
		<ul style="list-style-type: none"> <li>Demonstration of Calibration with requisite standards (NIST or equivalent standards) during installation.</li> </ul>				
		<ul style="list-style-type: none"> <li>Training No. 1: Onsite demonstration and comprehensive training to be provided on operation and maintenance of the equipment, accessories and associated data processing software's by professional person(s) for at least 2</li> </ul>				



Sl. No	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
		days at IIT(ISM), Dhanbad.				
		<ul style="list-style-type: none"> <li>Training No. 2: Another onsite demonstration and comprehensive training to be provided on operation and maintenance of the equipment, accessories and associated data processing software's by professional person(s) for at least 2 days at IIT(ISM), Dhanbad after 1 years of installation or as may be requested by Indentor/Faculty-in-Charge.</li> </ul>				
30.	<b>Any additional component(s)/module(s)/software(s)/accessories which is a must/required for full functioning of the equipment must be listed here.</b>  Please use additional rows/sheets if required.	All necessary cables, Glands, connectors, terminations and other accessories necessary for the normal operation of the system should be included. Any sub system that is required for the operation of a function requested in this specification must be automatically included in the scope of supply and must not be added as additional after the order and delivery of the system. Important specification of the component(s)/module(s)/software(s)/Accessories.	<b>If required.</b>			
31.	<b>Any other item. (Add here)</b>	<b>If required. Use additional rows if required.</b>	<b>If required.</b>			
32.	--	--	--			

<sup>#</sup> Part number(s) must be given for each part/unit/module in a separate column.

<sup>##</sup> Specification must be mentioned on a given page no. in the brochure/flyer/OEM certified list/document. Reference Page number of each specification(s) should be provided as given in brochure/flyer/OEM certified list/document. Please mention the exact page number.

**Table 2. Other additional accessories and features (Optional):** separate list may be provided in the quote for additional items and accessories, which are optional in nature, if any.

Sl. No.	System Configuration/Feature	Minimum Qualifying Specifications	Minimum Quantity	Part Number(s) #	Specification is on Page No <sup>##</sup>	Cost of part /module /item
A1.	Laboratory Ball Mill	Sieve Mesh Size: BSS = 350, ASTM = 325, For Particle Size (45 micron).  Please mention make, model no. and exact specifications of the model.	01			
A2.	Certified Reference Material (CRM) / Certified Standards  for Standardization/Calibration	One or more unit (quantity) may be selected for order, as per requirement. With certificate for purity.				
	a. Potassium Hydrogen Thalate (>99.9%, 100g × 5 = 500g)		01			
	b. Anhydrous Dextrose (glucose) (100g × 5 = 500g)		01			
	c. Sodium carbonate (100g × 5 = 500g)		01			
	d. SUCROSE (100g)		01			
	e. CAFFEINE (5g)		01			
	f. UHP Graphite Powder (100g)		01			
	g. Nicotinic Acid (50g)		01			
	h. EDTA (20g)		01			
	i. Paraffin Oil (20g)		01			

	j. Corn Gluten (100g)		01			
	k. Calcium Carbonate (500g)		01			
	l. Synthetic Carbon (50g)		01			
A3.	<b>Additional Warranty (Optional)</b>  <b>(Except Data Acquisition or Analysis Unit/UPS Unit/Battery Unit/Balance)</b>	The cost of annual “comprehensive maintenance contract (CMC)” should be provided <u>separately</u> for extension of warranty for additional 5 years, on year-wise basis (for 4 <sup>th</sup> year, 5 <sup>th</sup> year, 6 <sup>th</sup> year, 7 <sup>th</sup> year, and 8 <sup>th</sup> year), which is beyond the normal 3 year warranty (1 <sup>st</sup> year, 2 <sup>nd</sup> year and 3 <sup>rd</sup> year) period <b>(Except Data Acquisition or Analysis Unit/UPS Unit/Battery Unit/Balance)</b> .				
	a. Warranty 4 <sup>th</sup> year	Cost of annual CMC (accessories, parts and consumables) for 4 <sup>th</sup> year since installation (excluding gas supplies and sample analysis kit)				
	b. Warranty 5 <sup>th</sup> year	Cost of annual CMC (accessories, parts and consumables) for 5 <sup>th</sup> year since installation (excluding gas supplies and sample analysis kit).				
	c. Warranty 6 <sup>th</sup> year	Cost of annual CMC (accessories, parts and consumables), for 6 <sup>th</sup> year since installation (excluding gas supplies and sample analysis kit).				
	d. Warranty 7 <sup>th</sup> year	Cost of annual CMC (accessories, parts and consumables), for 7 <sup>th</sup> year since installation (excluding gas supplies and sample analysis kit).				
	e. Warranty 8 <sup>th</sup> year	Cost of annual CMC (accessories, parts and consumables), for 8 <sup>th</sup> year since installation (excluding gas supplies and sample analysis kit).				
A4.	Any other optional	Specification/details of the				

	component/accessories offered by the OEM.	component/accessories.				
	Please use additional rows/sheets if required.					

**# Part number(s) must be given for each part/unit/module in a separate column.**

**## Specification must be mentioned on a given page no. in the brochure/flyer/OEM certified list/document. Reference Page number of each specification(s) should be provided as given in brochure/flyer/OEM certified list/document. Please mention the exact page number.**

**Table 3. List of other Certificates/Items to be produced by the OEM/Supplier along with the quote for tendered item.**

<b>Sl. No.</b>	<b>Description</b>	<b>Attached (Yes/No)</b>	<b>Please mention relevant page number</b>
1.	<i>Error! Reference source not found.</i>		
2.	<i>List of all accessories, with part(s) number(s), to be supplied by the OEM is required. All parts and accessories, which is necessary for full functioning of the TOC Analyzer must be supplied with the tendered/quoted item.</i>		
3.	<b>Warranty:</b> <i>A three-year onsite comprehensive warranty certificate including technical support is required from the OEM for TOC Analyzer and all standard/essential components, fittings and accessories including any consumable, parts, calibration standards as may be required for maintenance and operation of the equipment.</i>		
4.	<i>For Data Acquisition Unit/ Data Analysis Unit / Digital semi-micro or micro balance/ UPS Unit/Battery Unit, separate warranty certificate(s) should be obtained and enclosed from respective OEMs/suppliers.</i>		
5.	<i>In case the local representative of the OEM/Principal Company changes or withdraws; a letter of assurance by the OEM/Principal Company is required stating that they will directly cover the warranty and service the equipment as and when required as per the terms and conditions mentioned in this document.</i>		
6.	<b>Standardization &amp; Calibration:</b> <i>Certificate from OEM is required stating that the equipment should be properly standardized and/or calibrated (for measurements), free of cost, by the OEM/Supplier during the warranty period including any consumables, and standards as may be required. Standardization and/or calibration should be performed by experienced technician/engineer/personnel deputed/authorized by the OEM/Principal Supplier or through its Indian partner/agent/dealer. Total cost should include the cost of standardization and/or calibration on atleast yearly basis or as and when required or requested by the Indenter/Faculty-In-Charge/person-in-charge from IIT(ISM) Dhanbad during the Warranty period.</i>		
7.	<i>The OEM, without any additional cost, must provide undertaking regarding shifting &amp; reinstallation of the system by a professional team (through Indian agent/supplier, if required) to a permanent location if requested by the Indenter/Project (Principal Investigator)/Co-investigator/Faculty-in-Charge. Damage during the shifting, if any, of the equipment must be the liability of the OEM.</i>		
8.	<i>The OEM should certify that the TOC Analyzer Configuration and Control is a fully integrated system and all other components/accessories are fully compatible.</i>		

9.	<i>The OEM should certify that the TOC Analyzer Configuration and Control is a fully integrated system and all other components/accessories are fully compatible.</i>		
10.	As mentioned in “Table 2: Other additional accessories and features (Optional)”, the cost of annual “comprehensive maintenance contract (CMC)” <b>(except Workstation Unit/UPS Unit/Battery Unit/Balance)</b> should be provided separately for extension of warranty for additional 5 years, on year-wise basis (for 4 <sup>th</sup> year, 5 <sup>th</sup> year, 6 <sup>th</sup> year, 7 <sup>th</sup> year, and 8 <sup>th</sup> year), which is beyond the normal 3 year warranty (1 <sup>st</sup> year, 2 <sup>nd</sup> year and 3 <sup>rd</sup> year) period.		
11.	<i>A guarantee should be given by OEM to supply all the parts, if required, for at least 10 years from the date of installation.</i>		
12.	<i>Certificate for Hardware specifications and calibration(s) for equipment should be supplied (as mentioned in Table 1) including any additional accessories/features required for operation of the equipment. The documentation on specifications, calibration procedure, and results obtained should be provided as a printed document. <b>Soft copy of these documents must also be provided in a CD/DVD/USB pendrive.</b></i>		
13.	<i>Certificate for Hardware specifications and calibration(s) for “optional components” of equipment should be supplied (as mentioned in Table 2) including any other accessories/features. The documentation on such specifications, calibration procedure, and results obtained should be provided as a printed document. <b>Soft copy of these documents must also be provided in a CD/DVD/USB pendrive.</b></i>		
14.	<i>Detailed Catalogue/Product Brochure/Manual/Data Sheet/OEM certified list with part number(s) of the all the quoted item(s) listed in Table 1 (and any other additional accessories/features) and 2. <b>Soft copy of these documents must be provided in a CD/DVD/USB pendrive.</b></i>		
15.	Clientele List (with in India and other countries)		
16.	Performance Letter from the Clients (with in India and other countries).		