



भारतीय प्रौद्योगिकी संस्थान  
INDIAN INSTITUTE OF TECHNOLOGY

(काशी हिन्दू विश्वविद्यालय)

(BANARAS HINDU UNIVERSITY)

रासायनिक अभियांत्रिकी एवं प्रौद्योगिकी विभाग

DEPARTMENT OF CHEMICAL ENGINEERING & TECHNOLOGY

(उच्चावुशीलन केन्द्र एवं डी एस टी प्रायोजित 'फिस्ट' विभाग)

(CENTRE OF ADVANCED STUDY & DST DEPARTMENT UNDER FIST)

(वाराणसी - 221005) Varanasi - 221005

### QUOTATION ENQUIRY

Ref: ChE/2019-20/QTN/ 158  
Posting Date: 08.01.2020

Tender Closing Date: 29.01.2020

Date 08.01.2020

Tender Opening Date: 30.01.2020

Dear Sir,

Please submit your lowest rate for supplying the under mentioned items. Quotations in duplicate reach us before the date marked above and should contain the following information:

1. Full specification and make of the item offered and its rate F.O.R. Varanasi.
2. Sales Tax/GST at concessional rate as applicable to educational institution.
3. Your VAT/GST registration number, PAN&TAN numbers.
4. Conditions of supply and terms of payment.

If you are a manufacture of the item or if you have proprietary right over it, please mention it in the quotation and provide a certificate.

5. Please mention your agency commission in Indian Rs., if applicable (in case of imported items).
6. Please give undertaking as per annexure-I-B

Quotation must be sent in a **Scaled Envelope** with word "QUOTATION", our reference number, and due date as given above, clearly marked over it.

S. No.	Item	Specification	Qty
1	Cascade Continuously Stirred Tank Reactor and 05 others	Details specification is attached.	01

N.B: Other terms & conditions pertaining to item mentioned above, shall be mentioned below:

1. **Waranty Minimum 01 Year**
2. **Firm/Bidder should not have been blacklisted/delisted or put to any hold by any Institutional Agency/Govt. Department/Public Sector Undertaking in past 03 years.**
3. **The bidder must have executed same nature of works in the last 2 years in any IITs/NITs/Govt. Office/PSU/University/Autonomous Body with order value of at least Rs. 3 lakhs each(order copy must be attached.)**
4. **NSIC certificate mentioning permission to manufacture/fabricate Chemical and Mechanical Engg. Under Graduate laboratory equipment must be submitted.**
5. **Performance certificate should be relevant; e.g., for CRE lab equipment, a certificate from Process Control lab will not be acceptable/entertained.**
6. **The Order will be placed on the basis of item wise lowest price (L1).**

The sealed quotations will be opened on 30.01.2020 at 03.00 PM in the office of the Head, Department of Chemical Engineering & Technology, IIT(BHU) (This is mandatory in case of e-publishing)

Head of the Department  
Chemical Engg & Tech



Fax (फैक्स): 091-0542-2368092; Email : head.che@iitbhu.ac.in

0542-2368092, 6702029, 6702024

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Department of Chemical Engg. & Tech.  
भारतीय प्रौद्योगिकी संस्थान / Indian Institute of Technology  
काशी हिन्दू विश्वविद्यालय / Banaras Hindu University  
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S. No.	Item	Specification	Qty
1	Cascade continuously stirred tank reactor	Reactor : Material Stainless Steel 304 Grade Capacity 2 ltr (3 reactors) Stirrer : Stainless Steel Impeller and shaft coupled with FHP motor Feed Tank : Material Stainless Steel, Capacity 20 Ltr Feed Circulation : By Compressed air Flow Measurement : Rotameter 2 Nos. Piping : Stainless Steel and PU pipe Pressure Regulator : 0-2 Kg/cm <sup>2</sup> Pressure Gauge : Bourdon Type 0-2 Kg/cm <sup>2</sup> Control Panel Comprising of standard make on/off switch. Mains indicator etc.	01
2	RTD Studies in Continuously stirred tank reactor	Reactor : Material Stainless Steel 304 Grade, Volume 2Ltrs. (Approx.) Agitator : Material Stainless Steel Impeller and shaft coupled with FHP motor with variable speed control facility Feed Tank : Material Stainless Steel, Capacity - 20 Ltrs. (Approx.) Feed Circulation : By Peristaltic Pump (1No.) Piping : Stainless Steel and Silicon pipe. Stop Watch : Electronic (Two No.) Control panel comprises of :With Standard make on/off switch, Mains Indicator etc.	01
3	Plug Flow Tubular Reactor	Reactor : Material Borosilicate Glass, OD-32mm, ID-25mm, Length-1200mm Feed Tank : Material Stainless Steel (2Nos.), Capacity-10 Ltrs.(approx.) Flow Measurement : Peristaltic Pumps- 2Nos.(One each for Reactants). Piping : Stainless Steel and Silicon Pipe.	01
4	RTD Studies in Tubular Plug Flow Reactor (Coiled Tube Type)	Reactor : Material Stainless Steel 304 Grade, Volume (0.6-0.7) Ltrs (approx.) Feed Tank : Material Stainless Steel (2Nos.), Capacity-10 Ltrs. (approx.) Flow Measurement : Peristaltic Pumps, 2Nos. (One each for Reactants). Piping : Stainless Steel and Silicon Pipe.	01
5	Isothermal Batch Reactor	Reactor : Material Stainless Steel 304 Grade, Volume 3 Ltrs. (Approx.) Water Bath : Material Stainless Steel, Double wall, insulated with Ceramic wool. Heater : Nichrome wire Heater Stirrer (2Nos.) : Stainless Steel Impeller and shaft coupled with FHP motor. Temp. Sensor : RTD PT-100 type Control panel comprises of : Digital Temp. Controller : PID Controller, 0-199.9°C (For Water Bath) With Standard make on/off switch, Mains Indicator etc.	01



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सहायक प्राध्यापक  
Assistant Professor  
रासायनिक अभियांत्रिकी एवं प्रौद्योगिकी विभाग  
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Banaras Hindu University  
वाराणसी /Varanasi-221005

विभागाध्यक्ष /Head  
रासायनिक अभियांत्रिकी प्रौद्योगिकी विभाग  
Department of Chemical Engg. & Tech.  
भारतीय प्रौद्योगिकी संस्थान /Indian Institute of Technology  
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6	Isothermal Semi-Batch Reactor	Reactor : Material Stainless Steel 304 Grade, Capacity 3.0 Ltrs. (approx). Water Bath : Material Stainless Steel, Double wall, insulated with Ceramic wool. Heater : Nichrome wire Heater Stirrer : Material Stainless Steel Impeller and shaft coupled with FHP motor Feed Tank (1Nos.) : Material Stainless Steel, Capacity 10 Ltrs. Flow Measurement : Peristaltic Pumps, 2Nos. (One each for reactants). Piping : Material Stainless Steel and Silicon Pipe. Temp. Sensor : RTD PT-100 type Control panel comprises of : Digital Temp. Controller : PID Controller 0-199.9°C (For Water Bath) With Standard make on/off switch, Mains Indicator etc.	01
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विभागाध्यक्ष / Head  
रासायनिक अभियांत्रिकी एवं प्रौद्योगिकी विभाग  
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