



भारतीय प्रौद्योगिकी संस्थान रोपड़  
INDIAN INSTITUTE OF TECHNOLOGY ROPAR  
नंगल रोड, रूपनगर, पंजाब-140001/Nangal Road, Rupnagar, Punjab-140001  
Ph. 01881-242193, e-mail: stores@iitrpr.ac.in

File No. 108-10/IITRPR/PS

Dated: 05.10.2010

**SCHOOL OF MECHANICAL, MATERIALS AND ENERGY ENGINEERING**

Sealed Quotations are invited on behalf of Director, IIT Ropar in **TWO BID SYSTEM** [Technical and Financial Bids should be sent in separate sealed envelopes, duly superscribing the bids name on its cover and both envelopes should be in a common sealed envelope, duly superscribing the Quotation for <item(s) name> and Due Date and Time of the Quotation on Common Envelope's Cover]. The detailed specifications of the equipments are given on a separate sheet, attached herewith as **Annexure – I** and terms and conditions of our institute are given in **Annexure–II**. The quotations should be sent directly to the “**Registrar, Indian Institute of Technology Ropar, Room Number 104, Nangal Road, Rupnagar–140001, Punjab, INDIA with attention to Dr. Navin Kumar, School of Mechanical Materials & Energy Engineering**” so as to reach latest by 3 PM on 20.10.2010. The quotation (Technical bid) will be opened on 21.10.2010 at 4.30 PM in the presence of tenderers, if any. Interested parties may please send their offers with technical specifications, price bid and complete terms and conditions within the time mentioned. Provide the Proprietary Nature Certificate (PNC) authenticated by Patent Certificate for the specified equipment (if applicable). Interested bidder must submit a draft as per the money given in the table for each piece of equipment in favour of **Registrar, IIT Ropar, along with the quotation (i.e. with the Technical bid)** towards EMD, **failing which submitted quote will not be considered. Delivery of the equipments shall be required within 1-2 months of placement of the purchase orders.**

Sr	EXPERIMENT	EMD(Rs)
1	Acoustic Measurement System	10,000.00
2	Vibration Test System	35,000.00

**Enclosed: Annexure-I and Annexure-II.**

## Annexure-I

### Specification for Acoustic Measurement System

The system should consist of compact hand held Sound level meter with microphone and microphone calibrator as per the following accessories and technical specifications.

Sl.No.	Desirable Features and Specifications	
1	<b>Measurement Range</b>	20-140 dBA, Simultaneous measurement of RMS and peak with independent frequency weightings
2	<b>Time Weightings</b>	Slow IEC 61672 – Class 1 Fast IEC 61672 – Class 1 Impulse IEC 61672 – Class 1 Peak detector < 50/100 μS Impulse & Peak hold facility
3	<b>Frequency Weightings</b>	A, C, or Z
4	<b>Parameters for store and display</b>	<u>Display only</u> L <sub>Peak</sub> (C or Z weighting) L <sub>P</sub> (A, C or Z weighting and S, F or I weighting) <u>Display &amp; Store</u> L <sub>Pmax</sub> (A, C or Z weighting and S, F or I weighting) L <sub>Pmin</sub> (A, C or Z weighting and S, F or I weighting) L <sub>eq</sub> (A, C or Z weighting) L <sub>E</sub> (A, C or Z weighting) L <sub>0.1</sub> to L <sub>99.9</sub> (five simultaneous user-selected values available) Real time and Date Elapsed Measurement time Standard Deviation
5	<b>Memory</b>	Should have at least 20 MB internal memory & optionally External flash memory cards for storing of measured data (up to 32GB)

6	<b>Automatic Measurements</b>	<ul style="list-style-type: none"> <li>▪ The unit should be able to record and store time data over fixed times of 1 second to 24 hours in user defined period</li> <li>▪ Auto-synchronize to the clock</li> <li>▪ Real time Clock (calender)</li> </ul>
7	<b>Display</b>	<ul style="list-style-type: none"> <li>▪ Back-lit colour LCD Display with adjustable colour schemes to suit day &amp; night light conditions</li> <li>▪ Selected Measurement Parameter with level Warnings for Overload, Under Range</li> <li>▪ Battery Level &amp; External Power Indicators</li> <li>▪ Time &amp; Frequency Weighting</li> <li>▪ Elapsed measurement time</li> <li>▪ Real time short Leq (broadband mode)</li> <li>▪ Measurement Range</li> <li>▪ Instrument settings</li> <li>▪ Resolution : 0.1 dB over full range</li> <li>▪ Backlight</li> </ul>
8	<b>Measurement Annotation</b>	Voice & text both
9	<b>Battery</b>	Should have rechargeable Li-Ion with battery life of more than 8- hours continuous operation
10	<b>Environmental</b>	Should operate in the temperature range between $-10^{\circ}\text{C}$ to $+50^{\circ}\text{C}$ Humidity upto 95 % RH, Non condensing
11	<b>External Power</b>	Facility for connections to outside battery
12	<b>External Connections</b>	Download of data to a PC with USB and LAN both should be possible
13	<b>Outputs</b>	Should have AC output, DC output
14	<b>Software Support</b>	For analyzing and reporting on a PC It should be possible to Export Data directly to Excel.
15	<b>Accessories Required</b>	i) Output cable with adaptor for computer and printer ii) Wind Screens (with $\frac{1}{2}$ " & $\frac{1}{4}$ " microphones)

		<p>iii) Batteries</p> <p>iv) Carrying Case</p> <p>(v) Microphone extension cables of 3 m and 10 M length both</p> <p>(vi) Holder for microphone</p>
16	<b>Wind Screen Filters</b>	Should have automatic wind screen detection and correction
17	<b>Applications</b>	<p>Sound level meter should be used for frequency analysis, sound recording and FFT analysis. And should be extended for vibration analysis with suitable sensors.</p> <p>Should be Capable of High speed wireless connectivity with the development of the 2250 web-browser through router.</p> <p>Sound recorded as wave file can be analyzed in post processing software packages.</p> <p>Should be able to take tacho inputs from CCLD Probes.</p>
18	<b>Protection</b>	<p><b>Two levels of protection should be provided:</b></p> <ul style="list-style-type: none"> <li>• Guest level: for viewing only</li> <li>• Administrator level: for viewing and full control of the instrument</li> </ul>
19	<b>Software Needed</b>	<p><b><u>FREQUENCY ANALYSIS:</u></b></p> <ul style="list-style-type: none"> <li>• CENTRE FREQUENCIES <ul style="list-style-type: none"> <li>1/1-octave Band Centre Frequencies: 8 Hz to 16 kHz</li> <li>1/3-octave Band Centre Frequencies: 6.3Hz to 20 kHz</li> </ul> </li> <li>• MEASUREMENTS <p>X = frequency weightings A, B, C or Z , Y = time weightings F or S</p> </li> <li>• MEASURING RANGES</li> </ul>

**Dynamic Range:** From typical noise floor to max. level for a pure tone signal at 1 kHz 1/3-octave: 1.7 to 140 dB

**Linear Operating Range:** should be compliance with IEC 61260:  $\leq 20.5$  dB to 140 dB

**SOUND RECORDING:**

- **RECORDED SIGNAL**  
A-, B-, C- or Z-weighted signal from the measurement transducer
- **AUTOMATIC GAIN CONTROL**  
The average level of the signal is kept within a 40 dB range, or the gain can be fixed
- **SAMPLING RATE AND PRE-RECORDING**  
8, 16, 24, 48-KHz and 100, 50, 30, 10-sec respectively.
- Provision for Manual and automatic Control of Recording
- **RECORDING FORMAT** The recording format should be atleast 16-bit wave files

**FFT ANALYSIS:**

**Sampling Frequency:** Down sampling from 51.2 kHz

**Frequency Span:** 100 Hz, 200 Hz, 500 Hz, 1 kHz, 2 kHz, 5 kHz, 10 kHz, 20 kHz

**Lines:** 100, 200, 400, 800, 1600, 3200, 6400

**Zoom Centre Frequency:** Can be set so that the Frequency Span is

placed in the range 0 to 20 kHz

**Spectrum:** Averaged and Maximum

**Pre-weighting:** Z (none), A, B or C

**Exponential Averaging:** With an averaging time equivalent to 999 spectra, measured with Hanning

		<p>window and 67% overlap</p> <p><b>Linear Averaging:</b> at least up to 8 388 607 spectra measured with Hanning window and 67% overlap</p> <p><b>DISPLAY SPECTRA</b></p> <p>Provision for Two spectra superimposed</p> <p><b>Scaling:</b> RMS, Peak, Peak-to-Peak, Power, PSD, ESD</p> <p><b>Reference Spectrum:</b> provision for Compare spectrum to stored (measured) reference</p> <p><b>Axis:</b> should have Logarithmic or Linear X and Y-axis,</p> <p><b>X-axis:</b> Display full frequency range or expand the X-axis until only 20 FFT lines are displayed. Scroll option should be available</p> <p><b>Y-axis Display Range:</b> 5, 10, 20, 40, 60, 80, 100, 120, 140, 160, 180 or 200 dB. Auto-zoom or Auto-scale should be available</p> <p><b>Digital Post-weighting:</b> Z (none) or A-weighting</p> <p><b>Vibration:</b> Acceleration, velocity or displacement in dB or physical units.</p> <p>SI units (m/s<sup>2</sup>, m/s or m)</p> <p><b>Direct:</b> Voltage in dB or in Volt</p>
20	<b>Calibration by CIC</b>	Provision should be for Charge Injection Calibration should be available. Automatic and Manual calibration should be possible.
21	<b>Documentation</b>	Provision should be for documentation of measurements using photo, text and voice annotations.
22	<b>Back Erase</b>	Last 5 sec of measurement data
23	<b>Remote operation</b>	Through analog or GSM modem or LAN should be possible.

24	<b>Microphone Calibrator</b>	<p>EN/IEC 60942 (2003) Class LS and Class 1, and ANSI S1.40-1984</p> <p>Calibration accuracy<math>\pm</math>0.2dB</p> <p>94dB SPL or 114db SPL at 1KHz calibration frequency</p> <p>Distortion&lt; 1%</p>
25	<b>Applicable Standards</b>	<p>Sound Level Meter should comply with the following standards:</p> <p>IEC 60651:1979 Type I</p> <p>IEC 60804: 2000 Type I</p> <p>IEC 61672:2002 Class 1</p>
26	<b>Warranty/Guarantee</b>	<p>The product should carry at least two years warranty/Guarantee</p>
27	<b>Calibration Certificate</b>	<p>Certificates of calibration valid for 1 year is required from the Original Equipment Manufacturer (OEM) of the equipment for sound level meter and microphone calibrator both</p>
28	<b>Supporting catalogue &amp; demo</b>	<p>The detailed catalogue of the equipment covering <b>all the technical specifications and supporting technical documents</b> should be supplied along with the technical bid. The firm should <b>arrange the training</b> of the equipment.</p>

## Specification for Vibration Test System

The system should consist of following technical specifications.

<b>1. ELECTRODYNAMIC SHAKER</b>	
Nominal Force	400 Kgf (peak Sine) 280 Kgf (rms Random)
Armature Top Diameter	≥180 mm, to have stainless steel inserts for fixing the fixture
Frequency Range of operation	Frequency range 1 Hz to 3500 Hz
First major Armature resonance	To be less than 3000 Hz
Armature Positioning	Automatically operated with optical sensor and electronic control
Maximum Velocity	>1.6 m/sec (for all modes)
Maximum Displacement	≥38 mm
Axial Acceleration	≥50 g
Cross axial acceleration	≤5% of main axis
Stray magnetic field	To be less than 5 gauss at 150 mm above armature
Body suspension	By using air spring to be kept below 3 Hz
Payload capacity	≥150 Kg with internal pneumatic support
Trunion Assembly	Required for 90 <sup>0</sup> rotation of shaker
Interlocks for safety	The shaker should be protected for safety and should have interlocks for electromagnetic field-failure, armature- failure, over-load, over-temperature, insufficient air-flow, excess displacement on any side.
Shaker Cooling	A Centrifugal type Air Blower system to be supplied which should be operable from Amplifier/ Drive console by a proper rated starter and phase preventor system. The cooling system should have a 10 feet length air carrying hose pipe and an acoustic silencer at the air-delivery-end for less than 70 dB acoustic noise. (Air Blower should be made of grade A company)
<b>2. POWER AMPLIFIER</b>	
Amplifier Type	Digital, Class 'D', Switching
Power Output	8 KVA from Power Module which can be stacked in the rack console of Amplifier

Frequency Range	DC to 4000 Hz
Power Efficiency	>95%
Input Impedance	10 K Ohm
Harmonic distortion	Better than 1%
Signal to Noise ratio	$\geq 70$ dB
Switching Frequency	$\geq 150$ KHz
Modulation Range	DC to 10 KHz
Input Sensitivity	10 Vrms
Drive method	Direct coupled to Shaker without any matching transformer
Drive and Signal Cable	$\geq 5$ meters from Shaker
Power loss protection	Smooth shut down in case of power shut down.
Remote Operation	The Power Amplifier should be operable through a PC based GUI using RS232 or RS485 interface. The software should also log the voltage, current, temperature etc. of power amplifier.
Amplifier Control	Amplifier operation should also be controlled from PC for operations like reset, output gain, Online and offline, blower ON-OFF
Data Logging	Voltage, Current, Temperature, operating time, interlocks should be logged on to the computer hard disk for records and analysis
Signal Selection	Digitally interlocked signal selection should be provided for internal source, sine, random to eliminate possibility of any sudden jerk on vibrator table to safeguard the test article and fixture
<b>3. Vibration Controller</b>	
Type	The Vibration controller should have USB connectivity to PC for PC Controlled operation.
Input/ Output Channels	4 input/ 2 output channels for Servo & using 24-bit ADC & DAC for high accuracy.
Signal to Noise Ratio	>105 dB
Input & Output signal	20 Volt peak-peak
Harmonic Distortion	$\leq 98$ dB full scale
Accelerometer	Charge/ ICP type
Software packages	Sine, Resonance Search Track & Dwell, Random, Classical Shock

<b>(i) Sine</b>	
Frequency range	Up to 5 KHz
Controlled Dynamic range	95 dB or better
Loop time	10 msec or better
Sweep rate	Programmable (Linear and Logarithmic).
Control strategy	Single/ multiple in average/ maximal/ minimal mode
Graphical test profile	Reference spectrum, Control spectrum, measured spectrum, Drive spectrum
Test parameters	Acceleration, Velocity, Displacement, Frequency, Test duration etc.
Documentation	The software should have facility to export test results and graph in to MS Office during and after the test. The user should be able to store test results for future analysis.
Safety features	Signal loss, control and abort limits, event driven operation etc.
<b>(ii) Random</b>	
Reference profile	Unlimited breakpoints for PSD values ( $g^2/Hz$ ) to create desired test profile.
Frequency range	Should be upto 4000 Hz
Resolution	Upto 400 spectral lines or better
Randomization strategy	Based on Gaussian distribution
Controlled Dynamic range	95 dB or better
Loop time	200 mS @ 2000 Hz/400 lines
Degree of Freedom	2 to 1000 DOF
Sigma clipping	Programmable for 1.8 to 8

Test Level scheduling	Software should have provision to initiate the test at lower level which should be programmable in terms of (- dB level)
Soft start/shut down	Should be programmable by the user maximum up to 30 seconds.
Control strategy	Single/ multiple in average/ maximal/ minimal mode
Graphical test profile	Reference spectrum, Control spectrum, measured spectrum, Drive spectrum

Test parameters	Grms level, PSD level, Frequency, Test duration etc.
Documentation	The software should have facility to export test results and graph in to MS Office during and after the test. The user should be able to store test results for future analysis.
Safety features	Signal loss, control and abort limits, event driven operation etc.
<b>4. Piezo-electric Accelerometer</b>	
Type	Charge-type sensor (pC/g output)
Nominal Sensitivity	Should have 10 to 30 pC/g
Frequency Range	Up to 7 KHz
End Connector	10-32 microdot-BNC type on both ends
Connecting Cable	Should be minimum 5 m length, lo-noise connecting cable

<b>Warranty/Guarantee</b>	The product should carry at least two years warranty/Guarantee
<b>Calibration Certificate</b>	Certificates of calibration valid for 1 year is required from the Original Equipment Manufacturer (OEM)
<b>Supporting catalogue &amp; demo</b>	The detailed catalogue of the equipment covering <b>all the technical specifications and supporting technical documents</b> should be supplied along with the technical bid. The firm should <b>arrange 2 days training</b> of the equipment.
<b>Supplied to IITs</b>	The bidder should have supplied at least one similar capacity system to IITs in last two years.

## Annexure-II

**IMPORTANT INSTRUCTIONS AND TERMS & CONDITIONS PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS IF ITEMS ARE TO BE SUPPLIED FROM ABROAD AND COMPLY THE TERMS AS MENTIONED HEREUNDER**

1. Prices are to be quoted on 'ex-works' duly packed or on "F.O.B. International port" basis and also including agency commission payable to you, if any, showing clearly the following break up:-
  - a. Ex-works price
  - b. Packing & forwarding
  - c. Freight & insurance
  - d. Incidentals
  - e. Taxes payable by the institute
2. Indian agents address and percentage of agency commission included in above F.O.B. / Ex-works price. This will be paid to the Indian agents in Indian rupees only and not in **FE**. Please enclose copy of agency agreement entered into with your principals indicating the nature of after sales services of Indian agents, precise relationship & mutual interest in the business.
3. Measurements / weight: Net / gross of the consignment and estimated air freight charges from international port to Ropar (India). In case of an order, air worthy package should be used (as applicable) duly certified with documents – ply to – sanitary certificate (as per quarantine order 2003).
4. Estimated sea-freight (if applicable) charges from f.o.b. Seaport to sea-port in India.
5. Your banker's address.
6. Whether any export license is required from your international counterpart's government, if so, please confirm with details.
7. Ours being a government of India organization, we prefer "sight draft" terms of payment. Please confirm acceptance of the same. No advance payment. L/C in exceptional cases only.
- 8. Technical catalogue/leaflet justifying specifications must be enclosed without failing.**
9. Please confirm whether you are authorized to quote on behalf of your principals and if so, please enclose a copy of such authorization with your quotation.
10. The supplier shall provide a copy of the insurance policy along with invoice to the purchaser who makes arrangements to extend the validity of the policy, if necessary.
  - a. The supplier shall initiate and pursue claim till settlement, and
  - b. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim by the underwriters.

11. Foreign suppliers are requested to send their offer indicating the commission payable to the Indian agent directly to us for consideration.
12. Country of origin.
13. The institute shall provide the custom duty exemption certificate.
14. Liquidated damages: if a firm accepts an order and fails to execute the order in full or part as per the terms and conditions stipulated therein, it will be open to this institute to recover liquidated damages from the firm at the rate 2% of the value of the undelivered stores per month or part thereof, subject to a maximum of 10% of the value of the undelivered stores. It will also be open to this institute alternatively, to arrange procurement of the required stores from any other source at the risk and expense of the firm, which accepted the order but failed to execute the order according to stipulated agreed upon.
15. Patent rights: the supplier shall indemnify the purchase against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the goods or any part thereof in India.
16. Tenders are invited in duplicate sets complying the requirement for tender as detailed in the tender specification to be submitted in the company's / firm's letterhead neatly printed / typed duly signed by authorized person with the seal of the bidders. All envelopes containing the tender should be properly sealed. **Separate envelopes should be used for technical and price bid and indication to their effect may please be super scribed on the envelope.**
17. Period of validity: bids shall remain valid for acceptance for a period of 90 days from the date of opening.
18. Provide the proprietary nature certificate (PNC) for the specified commodities if applicable.
19. Late tenders i.e. tender received after the due date and time of submission as mentioned above may liable to be rejected.
20. The institute does not bind itself to offer any explanation to those bidders whose technical bid has not been found acceptable by the evaluation committee of the institute.
21. Those bidders who do not receive any communication for participation in price bid opening meeting may presume that their bid has not been accepted by the institute.
22. Conditional offer will not be accepted.
23. The person / officer signing the tender / bid documents should be delegated with an appropriate power of attorney (duly endorsed by a notary public) by the chief executive officer of the company to sign such documents.
24. Name and address of premier institutes and industries to which such equipment have been supplied should be mentioned with date.
25. **Warranty: Five years onsite maintenance and warranty for the instrument with factory/well trained engineer.**
26. Delivery period: the stores are required to be delivered / dispatched within 60 days from the date of receipt of the order by the supplier. All offers of delivery should be made ex-stocks, and a clear note should be inserted in case ex-stock delivery is not possible.

27. Opening of quotation: every quotation will be opened at the office of the concerned school/centre, IIT Ropar, at the time and date mentioned in the tender form. Time of commercial bid opening will be communicated (to those who qualify in the technical bid) through e-mail and a firm may send its accredited representative to witness the opening if it so desires.
28. Quality & specification of stores: the stores offered should be of the best quality available, unless otherwise specified confirming strictly to the specifications cited. The institute reserves the right to reject the stores as found unacceptable on these grounds.
29. Sales & income tax clearance: the intending supplier must be a registered dealer under central sales tax act. In such cases the intending supplier has to furnish this institute its sales and income tax clearance certificate (up to date).
30. Payment: 90% to 95% of the payment will be made by a crossed account payee cheque or RTGS, normally within 30 days from the date of receipt of the bill of the stores in good order and condition, and its successful installation and training & satisfactory performance.
31. Performance guarantee: the remaining 10% to 5% of the payment will only be released after the performance bank guarantee is produced for the same amount, else it will be released after the warranty period.
32. *Termination for default*: Default is said to have occurred.
  - (a) If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by IIT Ropar.
  - (b) If the supplier fails to perform any other obligation(s) under the contract.
  - (c) If the vendor, in either of the above circumstances, does not take remedial steps within a period of 30 days after receipt of the default notice from IIT (or takes longer period in spite of what IIT may authorize in writing), IIT may terminate the contract / purchase order in whole or in part and forfeit the EMD. In addition to above, IIT may at its discretion also take the following actions: IIT may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier shall be liable to compensate IIT for any extra expenditure involved towards goods and services to complete the scope of.
33. *Applicable Law*
  - a) The contract shall be governed by the laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such Commercial dealings/processing.
  - b) All disputes are subject to exclusive jurisdiction of Competent Court and Forum in Ropar, India only.
  - c) Any dispute arising out of this purchase shall be referred to the Registrar IIT Ropar, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Director of the Institute. The decision of such Arbitrator shall be final and binding on both the parties.
34. Submission of quotation: all quotations must be forwarded in sealed cover by mail only (ordinary post/regd.post/speed post/courier) addressed to the Registrar, (Attn: name of the person mentioned in the enquiry, name of the school), Indian Institute of Technology Ropar, Room 104, Rupnagar – 140001, Punjab, INDIA so as to reach within the specified period. The reference to the NIQ name and the last date for submission must clearly be super-scribed on the sealed envelope. To ensure receipt of quotations in time intending suppliers are advised to mail them 7

clear days in advance. If no counter offer is made in the quotation, it will be taken for granted that the offer is strictly in accordance with the specification and term and conditions laid down in the tender notice.

35. **The suppliers must support the quoted specifications with the help of original printed manuals of the equipments and must highlight the specification details in the original manual.**
36. The payment terms should be specified in the quotation clearly.
37. Service facility: Supplier should mention about the possible service set up in India and how capable they are to provide after sales service.
38. List of institutions/universities in India and abroad should be attached where the quoted instrument is installed.
39. The suppliers should supply service and operational manuals of the systems.
40. The product will be used for educational / research purpose, hence applicable academic discount must be offered and stated.
41. The suppliers MUST include a detailed compliance report vis-à-vis required specifications, **WITHOUT WHICH THE QUOTATION SHALL BE REJECTED WITHOUT ANY NOTICE.**
42. **In addition to institutes terms & condition following should be mentioned specifically.**
43. **Training should be imparted.**
44. **The manufacturer has to stand guarantee for the relocation of the instrument once the permanent campus of IIT Ropar gets ready for operation. They must be in a position to dismantle the setup in present campus and re-install it to the new campus. Necessary charges for the same may be shown separately in their offer.**
45. **Delivery of the equipments shall be required within 1-2 months of placement of the purchase orders.**
46. **IMPORTANT**
  - a. Director of IIT Ropar may accept or reject any or all the bids in part or in full without assigning any reason and does not bind himself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.
  - b. In case of any dispute, the decision of the Director of this Institute shall be final and binding on the Bidders.