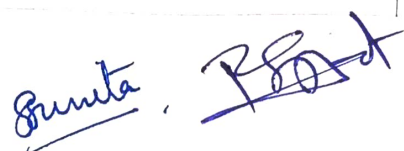


Subject: Reply of CUI on the queries raised by the bidders during the Pre-bid Meeting held on 06/08/2026.

Name of Equipment: Confocal Raman Spectrometer with Photoluminescence for the Department of Physics and Astrophysics.

Sr. No.	Name of Firm	Reference to NIT No. CUI/E&GA/HEFA/CIC/2026-27/53	Bidder's comment/observations	Reply from CUI
1.	Horiba	InGaAs detector for NIR measurement Air Cooled at or below -60°C Choice of Components Configuration as per CUI requirement to be bid in BOQ. (option request) As per Tender Documents	InGaAs detector for NIR measurement LN2 Cooled to be included with Air Cooled at or below -60°C We request for provision to quote break up prices for individual components in the optional Items (BOQ) Commercial Deviations: A. Commercial : s.no 14 – Terms of payment. 1. 80%: After Installation - Accepted 2. Please consider, balance 20% after 30 days from the date of handover of System and submission of PBG.	Agreed No Change No Change
2.	Laser Science	As per tender documents a) 1. High-throughput spectrometer: Spectral Range: 200 nm to 2100 nm or better using a single spectrometer. b) Focal length spectrograph 800 mm or higher c) Lasers should be directly coupled to the microscope and the spectrometer (without any fiber coupling). d) Spectrometer must use only mirrors for achromatic design without any change of optics across the full spectral range. e) Switching from UV to Vis to NIR	Spectrograph Focal Length The tender specifies a spectrograph focal length of 800 mm or higher. Kindly clarify whether systems having a different spectrograph focal length would also be acceptable, provided they achieve the specified spectral resolution, spectral range, sensitivity, and overall performance	No Change





range through software control and it should not involve any manual change or re-alignment of optics.

- f) The system must guarantee the optimum signal collection over the full range, therefore refractive optics such like lenses are not accepted.
- g) Sensitivity: Signal-to-noise ratio for Si 3rd order peak is better than 15:1.
- h) The spectrometer should have the capability to mount at least 3 detectors
- i) System must have option for adjustable confocal depth analysis using motorized pinhole with automated signal optimization.
- j) A USB colour video camera for viewing samples under white light and laser illumination. Video card for digitizing the image of sample, using programming software. Suitable mechanism for visualizing sample and 325 nm laser spot also should be offered.
- k) Scan to scan repeatability 0.1cm-1 (or better).
- l) Spatial Resolution: A lateral resolution should be better than 0.5 micron and an axial resolution typically should be better than 1.5 microns with a 100X objective in the visible range.
- m) Spectral Resolution (FWHM):
 - < 1.2 cm-1 or better at 325nm with grating 3000 gr/mm
 - < 0.3 cm-1 or better at 532 nm excitation wavelength with 3000 gr/mm
 - < 0.2 cm-1 or better @ 785 nm excitation with 1800 gr/mm.

As per tender documents

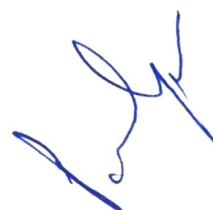
- a) 2. UV - 325 nm He-Cd 25 mW or higher:

Laser Configuration

The tender specifies support for up to six permanently mounted motorized lasers.

No

Change



- i. Edge filter to allow Raman measurement down to at least 150 cm^{-1} from the laser line.
- ii. PL filter with Spectral Range upto 1550 nm.
- b) Vis - Diode 532 nm 100 mW or higher:
- iii. Edge filter to allow Raman measurement down to at least 50 cm^{-1} from the laser line.
- iv. PL filter with Spectral Range upto 1550 nm.
- c) NIR - Diode 785 nm 100 mW or higher:
- v. Edge filter to allow Raman measurement down to at least 50 cm^{-1} from the laser line.
- vi. PL filter with Spectral Range upto 1550 nm.
- d) All lasers must be precisely focused to a circular spot for both single point and fast mapping analysis. Other shapes such as line-focus are not acceptable.
- e) The system should allow to couple permanently up to 6 motorized lasers directly coupled to the microscope. With free space coupling without any fiber to avoid Raman signal loss. The system must include all the necessary optics, and mechanical adaptations for coupling the lasers, adjusting their power.

a) 3. CCD detector:

- vii. Pixel Size: $26\text{ }\mu\text{m} \times 26\text{ }\mu\text{m}$.
Pixels: $>1024 \times 256$
- viii. Peltier Cooled to $-60\text{ }^{\circ}\text{C}$

Kindly clarify whether a system supporting **up to five permanently mounted motorized lasers**, with provision for future expansion, would also be considered acceptable, as the current tender requires only three excitation wavelengths (325 nm, 532 nm, and 785 nm).

Detector Ports

The tender requires the spectrometer to support **at least three detector ports**. Kindly clarify whether a system with **two**

**No
Change**

- ix. Peak Quantum Efficiency > 50%
- x. Spectral Range: 200 nm - 1050 nm
- xi. USB interface for the CCD must be provided
- n) The complete chip (1024 pixels) must be used to acquire the spectral data, in both stationary and continuous scanning modes, without spectral distortion.
- o) Dark Current at 60 °C : 0.018 e-/pixel/sec or better

Same detector should measure Raman and PL Range with software control.

detector ports, capable of supporting both CCD and InGaAs detectors and covering the complete required spectral range, would also be considered acceptable.

4. As per tender documents

785 nm Raman Edge Filter

Agreed

The tender specifies Raman measurements down to **50 cm⁻¹** from the 785 nm laser line.

Query:

Kindly clarify whether a system capable of achieving the specified Raman performance using a standard commercially available edge filter would also be considered acceptable, provided all required measurement objectives are achieved.







5. As per tender documents

Confocal Aperture

Kindly clarify whether a **motorized slit-type confocal aperture** providing equivalent software-controlled confocal performance would also be acceptable in place of a motorized confocal pinhole.

No
Change

6. As per tender documents

Autofocus

The tender specifies autofocus capability.

Kindly clarify whether an equivalent software-controlled autofocus mechanism that achieves the intended functionality for sample positioning and Raman measurements would be considered acceptable.

No
Change

7.

As per Tender documents

Payment Terms

With reference to the payment terms mentioned in the tender, we kindly request the University to consider revising the payment schedule for imported scientific equipment as follows:

No
Change

- **90% payment** against successful delivery, installation, testing & commissioning of the equipment and verification of the Performance Bank Guarantee.
- **Balance 10% payment** after successful acceptance of the system and completion of the one-month satisfactory performance test, against a valid Performance Bank Guarantee covering the warranty period.

7.

As per Tender documents

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With reference to the payment terms mentioned in the tender, we kindly request the University to consider revising the payment schedule for imported scientific equipment as follows:

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