



DEPARTMENT OF BIOTECHNOLOGY
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Dr. D. KARUNAGARAN

Professor and Head

Date: 30.10.2015

Ref: BT/GSAT/2015/026/SPL

Dt. 30.10.15

Due Dt.16.11.15

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.
2. The quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for should be submitted free of charges and collected back at the supplier's expenses.
6. **Local Firms:** Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates of Sales/General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales/General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have concessional sales tax applicable to non-government educational institutions run with no profit motive for which a Concession. Sales tax certificates will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

TECHNICAL SPECIFICATIONS FOR PURCHASE OF INVERTED PHASE CONTRAST MICROSCOPE

Pre-qualification criteria:

1. Only manufacturer(s) or their sole authorized distributor / agent are eligible to bid.
2. The tenderer should have a minimum 03 (three) years of experience for supply & successful installation of goods of similar specifications. At-least 02 (two) latest satisfactory installation reports must be enclosed with the technical bid.

Specifications:

1. Infinity corrected optical system, parfocal distance at least 60mm or better.
2. Microscope frame should be rigid, vibration free and rust-proof for easy maintenance.
3. Trinocular tube with light distribution 100:0:100, interpupillary distance 50-75mm
4. At least quintuple nose piece to accommodate five objectives at a time.
5. Detachable long working distance condenser that can be used for bright field/phase contrast/ fluorescent microscopy with NA of atleast 0.3 and WD atleast 55 mm.
6. Paired eyepieces of 10x magnification with F.O.V 22 mm or better having diopter adjustment facility on both eyes.
7. Built-in-Koehler illumination for transmitted light 12V100W halogen bulb (precantered) with motion sensor detects when an operator leaves and automatically turns off the light for long life of bulbs, light preset switch, built in filters
8. Mechanical stage with universal holder to accommodate all types of specimen holder (petri plates, terasaki, culture flask, glass slide, Haemocytometer, etc).
9. High quality chromatic aberration free infinity corrected, extra-long working distance (ELWD) objectives suitable for bright field, phase contrast technique.
 - (a) Plan achromat objective 4x (NA 0.10, WD 30.0 mm)
 - (b) Plan achromat 10x (NA 0.25, WD 10.50 mm), PH1
 - (c) S Plan Flour 20x (NA 0.45, WD 8.2-6.9) with correction ring, PH1
 - (d) S Plan Flour 40x (NA 0.60, WD 3.6-2.8) with correction ring, PH2
10. Camera should be compatible to attachment onto desktop/laptop through single wire.
11. C mount adapter should be provided.
12. All the necessary cables/ power supply must be included.
13. Microscope should be upgradable to fluorescence attachment in future.
14. Microscope, camera and software should be from same manufacturer for better compatibility
15. The firm should provide point by point technical compliance with the above specifications. The relevant manufacturer catalogue/brochure pages detailing the specifications must be included. The firm should quote the latest model available and the same should be mentioned in the brochure and webpage of the principal company with detail information.
16. The tenderers may be required to demonstrate the quoted model of the Equipment during the technical evaluation, if required, failing which their Bids/offer shall be rejected.
17. The equipment should be CE certified/FDA approved.

Optional:

1. Digital color CCD camera: Digital CCD camera capable of handling Bright field, Phase contrast, Fluorescence, DIC, Dark field images with 2/3" high density ccd chip, at least 5 Mega Pixel resolution (Temperature control with 10 degree less than the ambient temperature), dynamic range more than 1000:1, At least 10 - 20 frame per second, at-least 14 bit digital output, binning modes: 2x2, 4x4, Sensitivity Equivalent to ISO 80, Software should come along with camera for acquiring & capturing of images.

2. Image analysis software:

- a) Acquisition and device control up to three-dimensional acquisition.
- b) Image acquisition, Auto measurement, Auto counting
- c) Z-series image capture
- d) AVI live-stream capture
- e) Objective calibration
- f) Capturing data saving
- g) Report generator facility

3. Fluorescence unit: Fluorescence with alignment free 130W mercury/LED illumination. Fluorescence axis should have six to eight cube filter turret with Zero Pixel Shift technology. Single narrow band Filters for UV, Blue & Green range excitation and one triple band filter for UV/Blue/Green excitation

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