

## TENDER NOTICE

Competitive tenders are invited from various firms for the following laboratory equipments as per the specifications mentioned towards the purchase of equipments for the Department of Zoology, University of Kerala. The quotations in the sealed covers addressed to the Head, Department of Zoology, University of Kerala, Kariavattom, 695581 should reach the department on or before 21.03.2016, 4.00 pm.

### Item 1. ZOOM STERO TRINOCULAR MICROSCOPE WITH CMOS C- MOUNT CAMERA AND SOFTWARE

#### Olympus

#### **(a) Specification: - (Zoom Stereo Trinocular Microscope)**

Magnification	: 0.67x to 4.5x
Zoom ratio	: 6.7:1
Working distance	: 110mm
Tube inclination angle	: 45°
Interpupillary distance adjustment	: Left / right interlocked adjustment range: 52 to 76mm
Video camera adaptability	: C Mount (0.5x built in)
Zoom adjustment knob	: Left / right single-shaft horizontal knob Interpupillary distance high / low magnification stopper incorporated
Auxiliary objective	: Mounting by screwing into the thread at the bottom of the frame (M48 thread X 0.75) 110AL2X with working distance 38mm
Frame installation	: Mounting diameter: 76mm
Focusing adjustment	: Focusing stroke: 120mm
Stage plate	: SZ2-SPBW (Black & white for anti-ESD)
Light source	: Transmitted illumination : LED Reflected illumination :LED Average LED life span : 6000hrs. Input rating : 100-120 V/200-240V □ 0.15 / 0.1A, 50/60 Hz
Eyepiece	: WHSZ10x (FN 22)
Optical performance	: Zoom magnification (0.67x, 1x, 2x, 3x, 4.5x)
Using 2x Auxillary objective	: Zoom magnification (1.34x, 2x, 4x, 6x, 9x)
Ring light guide	: Used with LGB illumination system, ring light guide provides bright And uniform image.
Interlock dual light guide	: Standard oblique semi-rigid fiber optics light guide. The light source Position on the rear side of the stand saves desk space.

#### **(b) Specification: - (CMOS C- Mount Camera)**

**3.1 mp C-mount CMOS CAMERA** 1/2" CMOS sensor, complete with C-mount microscope adapter.

#### **Features needed:**

Resolution: 2048x1536, Frame rate: 12, Simple connectivity, Ease of use & installation, USB 2.0 plug-and-play, Real-time preview & capture with true colour imaging. Auto/manual exposure, auto/manual white balance,

Portability with laptop / computer OS Windows 7/8, (32/64 bit).

**(C) Specification: - (Image Analysis Software)**

**For arranging and measuring captured image, creating database and preparing reports.**

**Image Editing**

View	: Zoom preview, Image information, Slide show etc.
Image Processing	: Edge enhancement, Arithmetic Image Functions
Special filters	: For various image contrast
Morphometry	: Round less, shape, orientation, Image addition, subtraction, : Multiplication etc.
Measurement	: (a) Spherical calibration : (b) Line measurements for Distance, Length, Width, Perimeter Angle and three point Radius
Segmentation	: Measure area fraction and volume fraction. Identify multiple Phases within microstructure.