

**RAJA NARENDRA LAL KHAN WOMEN'S COLLEGE
GOPE PALACE, MIDNAPORE
PASCHIM MIDNAPORE-721102
Phone: 03222 275426**

Notice Inviting Tenders

Tender No.-rnkwc/12/2018 dated 31-5-2018

Sealed Tenders are hereby invited from reputed organizations/dealers/suppliers with suitable credentials for supplying and fitting of items/equipments/materials for up-gradation of laboratories in Raja Narendra Lal Khan Women's College to be procured from CPE fund of UGC and college fund. Details of Tender including List of equipments and details of all articles/ items to be supplied can be downloaded from the website: www.rnkwc.org. Interested, eligible parties may submit their tenders in their letterhead with suitable credential and all tax related details (P-Tax, I-Tax and S-Tax) to the Principal, Raja Narendra Lal Khan Women's College, Midnapore by 9th June, 2018 by 11.30 a.m. (Saturday). The tenders shall be opened on 9th June 2018 at 12.00 Noon. Interested Tenderers may remain present at the time of opening of tender

Last date and time for submission of tender: 09.06.2018 upto 11.30 A.M

Date & Time of opening of Tender: 09.06.2018 at 12 Noon



Principal
Dr. Jayasree Laha

Principal
Raja N. L. Khan Women's College
Midnapore, West Bengal

Sl. No	Name of the Instrument with Company & specifications	Qty
1	Microscope (Brand: Magnus Model: HM-100 Olympus)	05
2	<p><u>Permanent Slide of Plant specimen</u></p> <p>Study of vegetative and reproductive structures of <i>Nostoc</i>, <i>Volvox</i>, <i>Coleochaete</i>, <i>Chara</i>, <i>Vaucheria</i>, <i>Ectocarpus</i>, <i>Fucus</i> and <i>Polysiphonia Sp.</i></p> <p>Vertical section of Antheridiophore, Archegoniophore, longitudinal section of Sporophyte (<i>Marchantia sp.</i>) Vertical section of thallus (<i>Anthoceros sp.</i>) Vertical section of thallus (<i>Pellia sp.</i>) Vertical section of thallus (<i>Porella sp.</i>) Whole mount of leaf (<i>Sphagnum sp.</i>) Permanent slides showing antheridial and archegonial heads, Longitudinal section of capsule and protonema (<i>Funaria sp.</i>) Longitudinal section of ovule, transverse section of root (<i>Cycas sp.</i>) Longitudinal section of female cone, tangential longitudinal section & radial longitudinal sections stem (<i>Pinus sp.</i>) T.S of stem and vertical section of <i>Gnetum</i> ovule Longitudinal section of <i>Selaginella</i> strobilus T.S of <i>Equisetum sp.</i> rhizome Sexual structure of <i>Albugo sp.</i> Thallus, soredia, apothecium of lichens Zygosporangium of <i>Rhizopus sp.</i> <i>Psilotum</i>- Transverse section of synangium Transverse section of rhizome, whole mounts of prothallus with sex organs and young sporophyte (<i>Pteris sp.</i>)</p> <p>Full set of Mitosis & Meiosis [<i>Allium cepa</i>] Ring chromosome Laggard chromosome Sticky bridge in anaphase</p>	Two each (app.)

EQUIPMENT LIST FOR CPE-BOTANY

Department of Geography [List of Instruments

Item No.	Name of the Instrument	Specification	Quantity	<input type="checkbox"/>
1	GPS	Garmin—72 H	02	
2	GPS	Garmin —E-TREX	04	
3	Sieve set	Metal	02	
4	Sieve shaker	MECHANICAL	02	
5	Flow meter	Digital	01	
6	Portable air quality monitor	SERIES—500 AEROQUAL	01	
8	Rock set Dolerite Pegmatite Conglomerate Limestone Phyllite Quartzite Marble	Size about 5cm / 6cm	2 for Each specimen 2x7	
8	Mineral Set Feldspar Magnetite Hematite Chalcopyrite Galena Gypsum Bauxite	Size about 5cm / 6cm	2 for Each specimen 2x7	
10	Strike plate	(tools for mineral identification)	10	
11	Soil Kit	For 50 kinds of test	02	

Department of Chemistry

<u>Item</u>	<u>Qty.</u>
Heavy duty Brass regulated burner for LPG	40
Oil free vacuum pump (Rocker 410)	1

Department of Physical Education

Sl. No.	Equipment	Quantity
1	Starting Clapper	01
2.	Take Off Board	01
3	Stop Board	01
4.	Starting Block	04
5	Metronome	01
6	Leg & Back Dynamometer	01
7	Body Composition Measurement	01
8	Stop Watch	03
9	Volley Ball Tri Colour	04
10	Badminton Racket	06
11	Shuttle Baral	03
12	Basket Ball	
13	Kho kho Pole	01 Pair
14	Finishing Stand	02
15	Marking Cone	50

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DEPARTMENT OF PHYSICS

Sl. No.	Name of the Instrument	Quantity
1.	High voltage Power supply for sodium lamp	5
2.	Hydrogen discharge tube	5
3.	A. C. Millivoltmeter	4
4.	Digital Multimeter	05
5.	Melde's Experiment Setup	01
6.	Searle's Apparatus setup for Thermal Conductivity of copper.	01
7.	Experimental Setup of Coupled Oscillator	01
8.	Millikan Oil drop apparatus setup	01
9.	Laboratory heater plate(ractangular)	03
10.	Experimental setup for Photo-electric effect	01
11.	He-Ne Laser	01
12.	Matlab software	01

Department of Physiology-Microbiology-Nutrition			
1	<p><i>Technical Specifications for Total Internal Reflection Fluorescence Microscope and related accessories:</i> Essential Items:</p> <ol style="list-style-type: none"> 1. <u>Microscope</u>: Fully motorized inverted microscope with accessories for BrightField (BF), PhaseContrast (PC), Fluorescence (FL) Differential Interference Contrast (DIC) illumination visualization and Imaging. High resolution objectives 10x, 40x, 60x/63x TIRF objective (NA 1.47 or more), 100x TIRF objective (NA 1.47 or more). Motorized XY scanning stage with sample holder attachments for glass slide, 35mm dish, multi well plate. Motorized Z movement with automatic refocusing. Microscope should come with a pre-centered 100/120W Halogen / LED illumination for transmitted light and DIC applications. The system should have 6 position or higher motorized Fluorescence filter turret. 6 positions motorized DIC nosepiece. The microscope should be capable of conducting live cell imaging applications without focus drift. 2. <u>TIRF attachment</u>: Motorized Laser TIRF illuminator combiner which should allow Laser incident angle adjustment, Shutter Control and motorized switching to widefield fluorescence excitation. The system should be capable of capturing simultaneous multi-wavelength TIRF images with same penetration depth for all the colours. 3. <u>Lasers</u>: Solid state or Diode lasers for 488nm (100mW), 515nm/530nm (50mW), 560nm (100mW) and 640nm (100mW) with optical fibre. Xenon arc lamp for epifluorescence. 4. Image Splitter: Dual view image splitter for emission splitting system to acquire 2 spatially identical but spectrally distinct images simultaneously with dichroic sets/cubes for green-red emission and cyan-yellow emission suitable for single molecule FRET (Fluorescence Resonance Energy Transfer) applications. 5. Detection system: EMCCD Camera with Quantum efficiency greater than 90% and single photon sensitivity. Frame speed 55fps or more @512x512 resolution and cooling capacity upto -80 0 C. 6. <u>Filter Set</u>: BandPass filters: 488-561 Optical 	1	Physiology-Microbiology-Nutrition (together)

	<p>filter, 488-635 optical filter, 488-561- 635 Optical filter.</p> <p>7. <u>Computer workstation</u>: Latest configuration system should be supplied with High resolution 32” TFT/LED monitor for fast and easy data acquisition and analysis. A suitable UPS should be supplied with at least 30 mins power back up.</p> <p>8. Software: Easy to handle, user friendly software. Basic image acquisition and complete microscope operation, camera operation and laser control should be software operated. Should be capable of saving all instrument parameters along with the image for repeatable/reproducible imaging. Software should have real time simultaneous control for all the motorized devices. Should be capable of analysis of FRET data. Any up gradation or new version of acquisition and analysis software should be included.</p> <p>9. <u>Anti vibration table</u>: A suitable vibration isolated table with active air dampening facility to be provided along with the system.</p> <p>10. UPS: A suitable online UPS for running the entire system. Should be digitally controlled, Single phase output 230V (power factor>.9), Output frequency 50 Hz, efficiency> 90% at full load, backup time 30 mins at full load condition.</p> <p>11. Warranty: 3 years comprehensive warranty on all parts and services.</p> <p>Optional Items:</p> <p>12. Cooled CCD Camera with Monochrome and Color modes with 2.5MP or better resolution, 40 fps at full resolution.</p> <p>13. Glass/Quartz slides and glass cover slips suitable for surface immobilization and single molecule measurements (pack of 50 slides).</p> <p>14. LongPass (LP) filters: Dichroic Units 500LP, 525LP and 595LP for single molecule FRET applications. 15. Compact table top Plasma Cleaner for cleaning glass and quartz slides and removal of organic matter from slide surface. Adjustable RF Power, Active fan cooling, 1/8”NPT metering valve to control gas flow and chamber pressure. Plasma cleaner should be accompanied with a vacuum pump compatible with the model. Vacuum Pump: Pump speed of 1.4m³/hr and an ultimate total pressure of 0.27mbar or less. 16. Warranty or CMC</p>		
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	after completion of the 3 year warranty period.		
2	<p><u>Transilluminators</u> (UV, White, Blue) Specifications: UviPure UviVue single and dual wavelength Highly polished 'ondulex' reflectors</p> <ul style="list-style-type: none"> • Compact design, small footprint • Stainless steel filter frames • UV blocking safety cover • Dual wavelength models • White Light model • Blue light version 	1 pc	
3	<p><u>Thin Layer Chromatography Apparatus: Spreader</u> (applicator) made of electroplated brass.2. Perspex base of 114x23 cm to support glass plates.3. Plate rack alluminium, anodised for ten 20x20cm or 20x10cm plates.4. Developing tank with lid.5. Spotting template made of perspex.6. TLC plates set of five 20x20cm. and two 20x5cm, or set of ten 20x10cm and two 20x5cm7. Glass sprayer with rubber bellow, cap. 100ml8. Micro-pipette9. Subscriber for marking lines made of stainless steel</p>	1 set	
4	<p><u>Modernized Thin Layer Chromatography Apparatus</u> The CAMAG Nanomat 4 serves for easy application of samples in the form of spots onto TLC and HPTLC layers, precisely positioned and without damage to the layer. Twin Trough Chambers CAMAG Twin Trough chambers offer several ways to specifically affect the TLC/HPTLC separation in order to improve it. CAMAG smartALERT for dependable monitoring of TLC/HPTLC plate development in a glass development chamber. Convenient and precise cutting of pre-coated TLC/HPTLC glass plates. Reagent Sprayer This all glass reagent sprayer is a low cost alternative to the TLC/HPTLC Sprayer. It comes with a rubber pump but may also be operated from a compressed air or nitrogen supply.</p>	1 set	
20.	Deep freeze -20 degree Celsius	1	
21.	LG/Samsung 165 ltrs. refrigerator (single door)	01	

Department of Music

1	Scale changing Harmonium	01
2	Tanpura (Electric)	02
3	Tanpura (Manual)	02
4	Internet connection & Antivirus for the Staff-Room Computer	
5	Books and Journals	
6	Miscellaneous	

Internet Connectivity

LAN : Laying and fixing of CAT 6 Cable along with required ports and switches.

(Bidders are requested to contact college for detailed information, Mob: 9932241708)

Materials for Up-gradation/furniture/other items (Use the format below for providing rate/quotation)

Sl No	Description of the work	Measurement/ quantity	Rate
1.	Supply, fitting and fixing by black stone slab / Marble (Kota) for laboratory table (cement mortar-1:2 including grinding and polishing), top covered by Granite slab (0.6 to 1.0 sq. mtr.) and front covered by green ply with mica two door system (height-2.6 ft, wide- 2.5 ft)	Measurement top - top in sq ft	
2.	Supply, fitting and fixing by black stone slab / Marble (Kota) for laboratory table (cement mortar-1:2 including grinding and polishing), front covered by green ply with mica two door system (height-2.6 ft, wide- 2.5 ft)	Measurement top - top in sqft	
3.	Supply, fitting and fixing by black stone slab / Marble (Kota) for laboratory table (cement mortar-1:2 including grinding and polishing), top covered by Granite slab (0.6 to 1.0 sq. mtr) (height-2.6 ft, wide- 2.5 ft)	Measurement top - top in sqft	
4.	Laboratory Partition by particle board and frosted glass with aluminum channel (Particle board Floor to 3 ft and ceiling to 3 ft, middle frosted glass)	Per sqft	

5.	Laboratory Partition by particle board and frosted glass with door with aluminum channel (3.6ft/7.6 ft) (Particle board Floor to 3 ft and ceiling to 3 ft, middle frosted glass)	Per sqft	
6.	Aluminum channel with glass sliding window	Per sqft	
7.	Supply and laying by specified vitrified tiles (Brand IS 15622:2006 and tested as per IS 13630:2006 in floor, skirting set in 20 mm thick sand cement mortar (1:4) bed prepared after application of slurry using 1.75 Kg cement per sqmtr over the base and 2 mm thick cement slurry using cement @2.91 Kg/sqm at the back side of the tiles and laid the mortar bed using 0.2Kg/sqm of white cement used for joint filling and removal of wax coating by warm water using soft cloth as like mirror finishing including cost of materials, labor and all other incidental charges.	Per sqft	
8.	Supply, fitting and fixing of table by branded 19 mmply specified by IS with wooden frame Saal top branded mica laminating front covered 8.0 inch modesty (size-72 inch/14 inch.) Height 2.5 ft	Sqft (Length Top /Width top)	
9.	Supply, fitting and fixing for table by branded 19 mmply specified by IS with wooden frame Saal top branded mica laminating front covered 8.0 inch modesty (size-72 inch/14 inch.) Height 1.5 ft	Sqft (Length Top /Width top)	
10.	Supply, fitting and fixing of computer table by green ply specified and branded mica laminating front covered 8.0 inch modesty (size-6.5 ft/2ft.) Height 2.5 ft includes: single drawer (8 inch/12 inch),single palla (18 inch/12inch), 2 CPU holding space and 1 UPS holding place, Floor covered by branded Ply, Vertical glass (12mm) fixed 3 side on top of the table	per pc	
11.	Supply, fitting and fixing of computer table by green ply specified and branded mica laminating front covered 8.0 inch modesty Height 2.5 ft includes: single drawer (8 inch/12 inch),single palla (18 inch/12inch), CPU holding space and 1 UPS holding place, Floor covered by branded Ply	Sq ft	

12.	Supply, fitting and fixing of ware drop by green ply specified and outside branded mica laminating depth 18 inch inside polish front pall frame with glass	Sqft (Length Front /Width Front	
13.	Supply, fitting and fixing of ware drop by green ply specified and outside branded mica laminating depth 8 inch inside polish front pall frame with glass	Sqft (Length Front /Width Front	
14.	False ceiling by grid system powder coating channel with 2ft/2ft laminated gypsum board	Sq ft	
	Flash door with both side laminated by mica with Godrej lock and door closer(7ft by 3.5 ft)	2 nos.	
15.	Revolving Computer Chair with backrest and armrest (Small and medium size)	65 Nos (app.)	
16.	Working table (3 ft.X6 ft. and 6ft by 4 ft) inside outside polishing. Give rate in top to top per sq ft.	4 (app.)	
17.	Book Case (steel made , five rack)	3 nos (app.)	
18.	Steel almirah	3 nos. (app.)	
19	Display board (wooden made, 55cm)	3 nos. (app.)	
20.	Repairing wooden laboratory working table	As per specified	
21.	Putty with double coated painting inside the room	Sq mtr	
22.	IP-PBX Wireless Extension/ PoE supported LAN with installation and delivery charge	30 users	

Specification of Chair:



