

**MAHARISHI COLLEGE OF NATURAL LAW,
SAHEED NAGAR, BHUBANESWAR, 751007**

QUOTATION CALL NOTICE

No-RUSA/1339/30/18

Date 10.01.2018

Sealed Quotations are invited from intending Manufactures/Firms/Suppliers/ Authorized Dealers/Book Sellers/Publishers having PAN & GST registration for supply of Laboratory Apparatus/ Equipments, Library Books , Book Rack ,Projector, Computer & Furniture etc and those should reach the undersigned within three weeks from the date of advertisement .The items shall be purchased from RUSA Funds as per guidelines. The details of the requirement with specification, Terms & Conditions are available in the College Web Site, www.maharishicollegebbsr.org.in(**College website ID must be entered in WEB URL**). The undersigned reserves the right to reject any or all the quotations without specifying any reasons there of.

Sd/-

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Terms & Conditions

1. The quotation may be submitted in a sealed envelope super scribing “Quotations for supply of RUSA items.”
2. Price quoted should be inclusive of all applicable taxes
3. It is mandatory to furnish the valid GST Certificate, Pan No & Authorized Dealership Certificate.
4. Delivery should be within Three Weeks from the date of receipt of the order for supply.
5. The supplier may be asked to submit the suitable test certificate to confirm the specification.
6. In case of delay, if the delay is more than 10 days ,the order shall stand cancelled.
7. The payment will be done after receipt of a certificate from the concern HOD
8. Rates once submitted can't not be changed & valid for at least one Year.
9. Quotation shall be submitted Department wise strictly as per make & specification.
10. All quotations from a firm/ supplier should be submitted department wise with one forwarding letter.

Any other query contact Mobile No - 9437356564

(A) EDUCATION DEPARTMENT

LIST OF APPARATUS/EQUIPMENT

SL. NO.	NAME OF THE ITEMS	QUANTITY
1	<u>Over Head Projector</u> UNICON make, Model GE – 100 Having 24V- 250W. Halogen bulb with double Fresnel condenser, cross flow air cooling & Hi – Low intensity, writing surface 250x25mm with standard accessories	1
2	ELECTRONIC SMART BOARD	1
3	RAVEN'S PROGRESSIVE METRICS(MANUAL SCORING KEY)	1
4	STANFORD-BINET INTELLIGENCE TEST	1
5	MINNESOTA MULTI PHASIC PERSONALITY INVENTORY	2
6	THE WECHSLER'S SCALES(1934 AND 1955)	2

(B)Department of Physics: (4th semester)

Sl.no	Description of items	Qty
1	"e/m" of an Electron by Magnetic Focussing Method, "OMEGA", Type:EM-35	1
2	"e/m" Apparatus Bar Magnetic Method, (Thomson Method), "OMEGA", Type:EM-30	1
or	"e/m" Apparatus Bar Magnetic Method,"PISCO" (Thomson Method),complete with 3" C.R.T power supply,wooden stand, magnetometer and a pair of bar magnet, cat. no:EP-155	1
or	"e/m" Apparatus Magnetic Focussing Method, "PISCO", cat. no:EP-158,complete with CRT, power supply, focussing coil etc.	1
3	Millikan's Oil Drop Apparatus, "PISCO", with telescope, light source, atomizer and power supply cat.no:159	1
4	Tunnel Diode characteristics Apparatus with Digital Panel Meters, inbuilt DC Regulated power supply of 5 volts, Two 3 ^{1/2} Digit Digital Power Meter for measuring the voltage across resistance and tunnel Diode) Range: 0-2V DC Current control on front panel, Tunnel Doide-IN 3717, "MARS", Model: ME-537	1
5	Determination of Electronic charge by using a Rectifier with power supply and 2 meters (C.R) , "OMEGA", Type: ETB-162	1
6	Measurement of wavelength by Diffraction Grating method,(C.R), "OMEGA", Type:ES-252	1
or	Wavelength of He-Ne Laser light by Diffraction Grating Method,(C.R), "OMEGA",Type:ES-3161	1

Department of Physics: (3rd semester)

Sl.no	Description of items	Qty
1	Planck's Constant Experiment (by LED's), 'OMEGA", Type:ES-390	1
or	Planck's Constant by Vacuum type Photocell with three Filter (C.R), "OMEGA", Type:ES-317	1
2	Travelling Microscope (Vernier Microscope) Vernier reading to 0.02 to 0.01mm. Horizontal scale is graduated up to 17mm and vertical scale 15mm embedded stainless steel scale. Cast iron heavy bed with levelling screws. Vertical and horizontal slide can be clamped at any position. (2 motionLAFCO)	1
3	Verification of Ohm's Law, series and parallel circuit with power supply and 2 meters (C.R), "OMEGA", Type:ETB-128	1
4	Decade resistance box, (eight dials)1 ohms to 100 M ohms, DRBC-115L8,OMEGA	1
	Decade resistance box, (seven dials)1 ohms to 11,11,1110 M ohms, DRBC-115LN,OMEGA	1
	Decade resistance box, (six dials)1 ohms to 11,11,1110 M ohms,60 steps DRBC-115L,OMEGA	1
	Decade resistance box, (six dials)10 ohms to 1,11,11,100 ohms,60 steps DRBC-115M,OMEGA	1
	Decade resistance box, (five dials)1 ohms to 1,11110 ohms,40 steps DRBC-115H,OMEGA	1
	Decade resistance box, (four dials)1 ohms to 11,11,1110 ohms,60 steps DRBC-115E,OMEGA	1
	Decade resistance box, (three dials)1 ohms to 1,110ohms,30 steps DRBC-115A,OMEGA	1
or	Resistance box, teak wood box fitted with 7/16" rectangular brass, blocks, accuracy + or – 0.1%,JLAB	1
	1-50 ohms ,constant coil	1
	1-100 ohms constant coil	1
	1-500 ohms, constant coil	1
	1-1000 ohms,constant coil	1
	1-5000 ohms, constant coil	1
	1-10000 ohms, constant coil	1

5	Sodium lamp source-35 watts complete vacuum jacket, Transformer & wooden box, "OMEGA", Type:SLT-197	1
or	Sodium Vapour Lamp Transformer,LAFCO, 35 watt	1
6	Step Down transformer, LAFCO For low AC output voltage requirements in laboratories housed in steel cabinet.	1
	2—12 volts DC-1 amps	1
	2—12 volts DC-2 amps	1
	2—12 volts DC-3 amps	1
7	Physical balance,double door,teak wood base,varanashi type, Ambala Make	1
or	Physical Balance, KEROY,(Varanashi) Model: EI	1
or	Physical balance,double door	1

Department of Physics: (2nd semester)

Sl.no	Description of items	1
1	Cathode Ray Oscilloscope Demonstration Board with Power supply "OMEGA", Type:DB-11	1
2	Multimeter with battery & 1 meter, "OMEGA",Type:ETB-019	1
	Digital Multimeter Hand held ($3^{1/2}$ digit), "OMEGA",Type:DMM-101	1
3	Logic Gates Training Board on AND/NAND function with power supply,(C.R),"OMEGA",Type:LTB-819	1
4	Study of OR,AND and NAND Gates(using NAND Gate to make OR,NOR,NOT,AND,EX-OR Gates,with power supply(C.R),"OMEGA",Type:LTB-819	1
5	Boolean Algebra Trainer with power supply,(C.R), "OMEGA",Type:LTB-818	1
6	Logic Training Board on OR/NOR function with power supply,(C.R),"OMEGA", Type:LTB-801	1
7	Logicom with power supply (C.R),OMEGA", Type:LTB-805	1
8	4 Bit Binary Full Adder and Subtractor with power supply (C.R),"OMEGA", Type:LTB-860	1
9	Half Subtractor ,Full Subtractor, Adder- Subtractor using Full Adder I.C, "PISCO", Model:EP-80	1
10	Study of Multivibrators (BMV,AMV,MMV)using IC 555with power supply and Oscillator,1KHz, "OMEGA", Type:ETB-141	1
11	To Design an Astablemultivibrator using 555 timer, "PISCO",Model:EP-201	1
12	To Design and MonostableMultivibrator using 555 timer, "PISCO", Model:EP-200	1

Department of Physics: (1st semester)

Sl.no	Description of items	Qty
1	Determination of J(Mechanical Equivalent of Heat) by Callender-Bernes' Method, "OMEGA", Type:ES-227	1
2	Determination of Young' Modulus of Rigidity and Poisson's ratio by Searl' Apparatus, "OMEGA", Type:ES-244	1
3	Study of Thermo E.M.F using Digital D.C Micro voltmeter, (C.R), "OMEGA", Type:ES-231	1
4	Using Platinum Resistance Thermometer, find the Melting point of a given Substance (wax) (C.R), "OMEGA", Type:ES-242	1
5	Power factor of A.C Joule's calorimeter, "OMEGA", Type:ES-202	1
	Determination of Mechanical Equivalent of Heat "J" By Electrical Method(Joule's calorimeter), "OMEGA", Type:ES-213	1
6	Digital Multimeter Hand Held(3-3/4 digit), "OMEGA", Type:DMM-201	1
7	Study of Different Thermocouple for Temperature Measurement (C.R), "OMEGA", Type:ES-362	1
8	To Determine Temperature co-efficient resistance of Metal conductor using Resistance Thermometer, "OMEGA", Type:ES-385	1
9	Temperature co-efficient resistance for Platinum Using Platinum resistance Thermometer, Callender and Griffith' Bridge (C.R), "OMEGA", Type:ES-354	1
10	Determination of Mechanical Equivalent of Heat "J" by Electrical Method(Joule's calorimeter), "OMEGA", Type:ES-213	1
11	Multimeter "OMEGA" Model:DMM-201	1
12	20, MHz Dual Trace Oscilloscope(Analog Oscilloscope), Imported, scree-5", "PISCO" EP-62	1
	10, MHz Single Trace Oscilloscope, "OMEGA", Type:CRO-10	1
	20, MHz Dual Trace Oscilloscope, "OMEGA" Type:CRO-20	1
	CRO 30, MHz Dual Trace Oscilloscope, "OMEGA", Type:CRO-30	1

INSTRUMENTS LISTS

Department of Physics: (5th semester)

Sl.no.	Description of items	Qty
1	Study of Electron spin resonance-determine magnetic field as a function of the resonance frequency	1
2	Study of Zeeman effect: with external magnetic field; Hyperfine splitting.	1
3	To show the tunneling effect in tunnel diode using I-V characteristics	1
4	Quantum efficiency of CCDs	1
5	Measurement of susceptibility of paramagnetic solution (Quinck's Tube Method)	1
6	To measure the Magnetic susceptibility of solids	1
7	To determine the coupling coefficient of a piezoelectric crystal	1
8	To measure the Dielectric Constant of a dielectric Materials with frequency	1
9	To determine the complex dielectric constant and plasma frequency of metal using Surface Plasmon resonance (SPR).	1
10	To determine the refractive index of a dielectric layer using SPR	1
11	To study the PE Hysteresis loop of a Ferroelectric Crystal	1
12	To draw the BH curve of Fe using Solenoid & determine energy loss from Hysteresis	1
13	To measure the resistivity of a semiconductor (Ge) with temperature by four-probe method (room temperature to 150 ^o c) and to determine its band gap.	1
14	To determine the Hall coefficient of a semiconductor sample.	1

INSTRUMENTS LISTS

Department of Physics: (6th semester)

Sl.no.	Description of items	Qty
1	To verify the law of Malus for planer polarized light.	1
2	To determine the specific rotation of sugar solution using polarimeter.	1
3	To analyze elliptically polarized light by using Babinets compensator	1
4	To study dependence of radiation on angle for a simple Dipole antenna.	1
5	To study the reflection refraction of microwaves.	1
6	To verify the Stefan's law of radiation and to determine Stefans constant.	1
7	To determine the Boltzmann constant using V-I characteristics of PN junction diode.	1
8	To study the polarization of light by reflection and determine the polarizing angle for air-glass interface	1
9	To determine the refractive Index of liquid by total internal reflection using Wollastons air film.	1
10	To determine the refractive Index of (1) glass and (2) a liquid by total internal reflection using Gaussian eyepiece.	1
11	To determine the wavelength and velocity of ultrasonic waves in a liquid(Kerosene Oil, Xylene, etc.) by studying the diffraction through ultrasonic grating	1
12	To determine the refractive Index of (1) glass and (2) a liquid by total internal reflection using Gaussian eyepiece.	1

Sl No	WORKING TABLE	Specification
1	Physics – wall hanging folded work table made of BWR ply & laminated top	Size 13'x2' 2'-6'' x2 3'-6''x2 14'x2'

(C) CHEMISTRY DEPARTMENT

Sl No.	Name of the items	Make/Model	Qty
1	Bakeman Thermometer	imported	<u>1</u>
2	Calorimeter	Systronics Model-112	1
3	Conductivity Meter Accuracy of Conductivity : +/- 1% FS +/- 1 digit Range: 0.1 us to 100ms Manual Temp. compensation: 0-60°C Co-efficient Cond. Temp: 0% to 9.9% With Auto Temp. compensation, LED display Option for printer port for 80 col. Dot matrix printer Complete with conductivity cell	Systronics Model – 306	1
4	Conductivity cell : cell constant 0.1/1.0	Systronics	1
5	Thermostat (constant temperature bath) High Precision (Digital) With stirrer, Chamber Size-450x375x375mm	Acumax	1
6	Quinhydrone 97%-25GM	SIGMA	1
7	Ostwalds Viscometer-Borosilicate Glass	JSGW	1
8	Weight box-Brass C.P. Analytical-1mg-100gm	Shiv	1
9	Head Phone	Pisco	1
10	Resistance Box (Diff.range) Education Quality Costanton coil-0.1 to 50	Pisco	1
11	Induction coil	Nisco	1

12	Potentiometer – Digital MV Range: 0 to +/- 1999V, Resolution 1mV Polarity: Automatic Input Impedance : 10 ¹¹ ohm Inbuilt max. stirrer, variable speed 3 ½ digit LED display Over Range: Last 3 digit blinking	Systronics Model – 318	1
13	Combined electrode		1
14	Potassium electrode K Filter		1
15	Melting Point Appts – Digital - For determination of melting point of solid samples, with cylindrical oil bath, - With inbuilt speed control magnetic stirrer - Electronic heat controller - Digital display with PT 100 sensor, upto 250°C - Glare free background light with adjustable, lite intensity, provision for holding the melting point display.	JSGW Cat No. 1206/A	1
16	Thin Layer Chromatography Kit With Perspex base plate 0.2mm thickness & length 114x23cm - Developing chamber with lid, TLC plate - Aluminium carrier, micro pipette, sprayer - Complete with aluminium applicator (spreader)	JSGW Cat No. 1175/2	1
17	Single beam Uv-vis Spectrophotometer 200 to 1000 Uv length band with 2nm With position sample holder 10mm path length cuvette	Systronics Model-118	1
18	Digital Balance Capacity : 220 g Least Count : 0.001 g Display Type : LCD	Citizen	1
19	Projector	UNICON make, Model GE – 100 Having 24V- 250W. Halogen bulb with double Fresnel condenser, cross flow air cooling & Hi – Low intensity, writing surface 250x25mm with standard accessories	1

FURNITURES ITEMS FOR CHEMISTRY LABORATORY

SI No	NAME OF THE ITMES	Make
1	Chemistry work table 80'' x56''x30'' with 8 cupboards, two regent racks, One sink, two water taps, two gas taps, top granite	LOCAL
2	General regent rack 6'x3'x6''x12'' made of teak	
3	General regent rack 7'x3'x6''x12'' made of teak	
4	Wall hanging reagent rack 5'-6''x34''x6'' teak wood	
5	Provision for gas & water lines including waste water drainage	

(D)ZOOLOGY DEPARTMENT

SI No.	Name of the items	Make/Model	Qty
1	<p><u>Electrophoresis Machine – Horizontal</u></p> <p>Submarine Electrophoresis System unit included buffer chamber, safety lid with cable.</p> <p>- UV transparency tray & one each of 1.5mm thick & 15 well comb. Tray Size: 7x10cm</p> <p><u>Electrophoresis Power Supply –</u></p> <p>Max output: 300v, 400 ma & 80 watts</p> <p>With time scan.</p>	<p>Tarson</p> <p>Cat No. 7030</p> <p><u>Tarson</u></p> <p>Cat No. 7090</p>	1
4	<p><u>Centrifuge Machine</u></p> <p>Max speed: 4400RPM, max Rcf : 2350 Dynamic brake for quick deceleration Safety lid stepless speed regulator, 0-60 minute count down timer. With swing out head: 8x15ml 4x50ml</p>	<p>REMI</p> <p>Model – R4C</p>	1
5	<p><u>Distilled Water Plant – Horizontal</u></p> <p>With Borosilicate Boiler & condenser, with quartz heater, All glass & horizontal metallic stand. Capacity: 4ltr/hr</p>	<p>Borosil</p> <p>Cat No. 3361</p>	1
6	<p><u>Paper Chromatography Machine</u></p> <p>Ascending or Descending, made of teak wood & Glass construction. For 46x57 chromatography paper.</p>	<p>JSGW</p> <p>Cat No. 1176</p>	1

7	<p><u>Water Quality Analyser</u></p> <p>For measuring of 8 parameter of water With accuracy of 0.01PH, 1V, +/- 1% FS conductivity, +/- 2% FS salinity, +/- 1% FS DO, 0.1°C temp, 0.05Abs colorimetric & +/- 2% of FS turbidity. With standard electrode & probe</p>	<p>Systronic</p> <p>Model – 371</p>	1
8	<p><u>PCR Machine</u></p> <p>With single aluminum alloy block of 96 well Compatible for 0.2ml PCR tubes 0.2ml 8 strip PCR tube, 96 well plate Grading Range: 1-25⁰ (Max 5, 6zcm) Grading Temp Range: 30-100°C Integrated TM Calculator, software</p>	<p>HiMedia</p> <p>Model – PRIMA – 96</p>	1
09	<p><u>Compound Microscope</u></p> <p>Body: Monocular die cast body inclinable up to a horizontal position (90⁰), Magnification: 100x-600x Stage: Plain square stage of 100 x 100mm, with two clips, mechanical stage (Optional) Nosepiece: Triple hole nosepiece with positive click stops for precise and smooth alignment of objectives. Focusing: By coarse and fine focusing knobs Eyepieces: Huygenian 10x & 15x Objectives: Hard anti reflection coated, color coded par focal achromat: 10x & 40x</p>	<p>Olympus , Model – HSA</p>	1
10	<p><u>Audio-visual equipment</u></p> <p>Led with HD</p>	<p>Sony</p>	1
	<p>Cabinet size: 60x30x60cm</p>		

(E)DEPARTMENT OF BOTANY

SI No.	Name of the items	Make/ Model	Qty
1	Senior Rotary Microtome Feeding range: from 1-50 micron in step of 1 micron each - with Automatic safety device, universal wide type object holder. - Complete with standard accessories	UNICON GE-70	1
2	Induction Cooker	Make-Bajaj/V.Guard 2000w	1
3	Aquaguard	Make-Kent/LG/Aqua guard 200Ltrs	1
4	Emergency Light	Make-Bajaj/Philips	1
4	PH Meter – Digital PH Range: 0-14PH, Accuracy: 0.01PH MV Range: 0-1999 MV, Accuracy: 1V Temp. compensation: Automatic / manual Range: 0-99.9°C Display: 7 digit With auto polarity & decimal point Provision for print port for 80 col. Dot matrix Complete with electrode	Systronics , Model – 361	1
6	Thermometer for measurement of room temp.		1
7	Compound Microscope Body: Monocular die cast body inclinable up to a horizontal position (90°), Magnification: 100x-600x Stage: Plain square stage of 100 x 100mm, with two clips, mechanical stage (Optional) Nosepiece: Triple hole nosepiece with positive click stops for precise and smooth alignment of objectives. Focusing: By coarse and fine focusing knobs Eyepieces: Huygenian 10x & 15x Objectives: Hard anti reflection coated, color coded parfocal achromat: 10x & 40x	Lawrence & Mayo	1
8	Colorimeter – Digital Complete with 8 filter Sample Volume: 1ml	Systronics Model – 112	1

9	Soil & Water Analysis Kit For measuring of 8 parameter of water With accuracy of 0.01PH, 1V, +/- 1% FS conductivity, +/- 2% FS salinity, +/- 1% FS DO, 0.1°C temp, 0.05Abs colorometric & +/- 2% of FS turbidity. With standard electrode & probe	Systronics , Model – 371	1
10	Autoclave – Vertical (Sterilization Chamber) Completely made of stainless steel Radial locking system Max. pressure: up 5-15PSI Fitted with pressure gauge, safety valve, pressure release valve, water level indicator & lifting system. Size: 350x550mm	Accumax	1
11	Colorimeter – Digital Complete with 8 filter Sample Volume: 1ml	Systronics Model – 112	1
12	Gram positive and Gram negative staining plate		1
13	Blood grouping kit Antisena-A A,BAB,O Antisena-B Antisena-D		1

(F)COMPUTER & ELECTRONICS ITEMS		
ITEMS	MAKE	Model/Specification/Configuration
Desktop	Dell/HP (Original Version)	24 inch Screen Intel Core i7 8 GB Memory 1 TB HDD Windows 10 Pro (Original Microsoft licenses)
Printer	HP	Laserjet Pro 400MFP m425dn
Antivirus	Quick Heal Total Security	
Camera	Cannon	EOS600
Electronic Smart Board		

(G)FURNITURE ITEMS		
ITEMS	MAKE	Model/Specification/Configuration
Almirah	Godrej	Store well M2(With Locker) Storewell Plane(Without Locker)
Book Rack for Library	LOCAL (Samples are available in College Library)	Iron Rack must be double side, each having 8 shelves,18" gauge Size -88" X 48" X 20". <ul style="list-style-type: none"> • Rack must not be joint pieces & both side slide glasses. • Rack Color- Ash
Books Ends	Local Iron	
Official Table	Godrej	Enterprise – 1500, Enzo- 5026, T-9
Official Chair	Godrej	Kareena HB, Leoma HB, Brand HB, Kareena MB,
Almirah (Zoology)	Godrej	Glass Door Store well
Rack for Specimens(Zoology)	Godrej	Size:12x8x3ft

(H)LIBRARY BOOKS
<p>Library Books shall be purchased as per CBCS syllabus. Books sellers/Suppliers are requested only to quote the Rate of discount in the following manner.</p> <p>(i) For English publication Books- Rate of Discount.</p> <p>(ii) For Odia publication Books- Rate of Discount.</p>

(I) DEPARTMENT OF PSYCHOLOGY

Sl No	Items	Make	Specification (If any)
1	Aesthesiometer Two – Point		
2	Raven’s Progressive Matrices, Black & White with complete Set with the followings- Booklet Answer Sheet Manual Scoring Key		
3	Memory Apparatus		
4	Tachistoscope with complete set (Fall Door Type) Span of Attention with Manual & Card		
5	SPSS		
6	Rorschach ink Blot Test		
7	Word Association Test Form		
8	Weight Lifting Box with complete Set with Followings- Weight- Standard 50gms & Difference 2 gms		

Sd/-

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