

OFFICE OF THE PRINCIPAL, RAJDHANI COLLEGE, BHUBANESWAR

No. 3054 //Dt. 9-11-17

QUOTATION CALL NOTICE

Sealed quotations are invited from registered firms/agencies having valid GST registration for supply of Laboratory Equipment, Laboratory Furniture and Chemicals in separate envelopes to The Principal, Rajdhani College, Bhubaneswar. Details of the specifications are available in the college website www.rajdhanicollege.org.in. Quotations with name of the department : "DEPARTMENT OF _____" should be super scribed on the cover, should reach the office of the Principal, Rajdhani College, Bhubaneswar on or before **21.11.2017** by 5.00 PM positively.

The sealed quotations will be opened in the presence of bidders or their representative if any on **22.11.2017 at 1.00 pm**.


The authority reserves the right to cancel/reject the quotations (one or any) without assigning any reason thereof.


Principal 9/11/17

Rajdhani College, Bhubaneswar

Memo No. dt.

Copy to College Notice Board/OIC, Website/Accountant/H.C for information & necessary action.


Principal
Rajdhani College, Bhubaneswar

CHEMISTRY

EQUIPMENT

| SL.NO. | ARTICLE | MAKE |
|--------|------------------------------|-----------|
| 1. | UV Visible Spectrophotometer | Systronic |
| 2. | Digital Potentiometer | Systronic |
| 3. | Digital Conductivity Meter | Systronic |
| 4. | UV Inspection Cabinet | |
| 5. | Refrigerator 245 litre | |

CHEMICALS AND GLASSWARE

| SL.NO. | NAME OF THE ITEMS | SPECIFICATION (MAKE) |
|--------|------------------------------------|----------------------|
| 1. | Acetic Anhydride | Qualigen |
| 2. | Acetanilide | Qualigen |
| 3. | Ammonium Nitrate | Qualigen |
| 4. | Ammonia Solution | Qualigen |
| 5. | Benzoic Acid | Qualigen |
| 6. | Ammonium Thiocyanate | Qualigen |
| 7. | Buffer Solution of PH 7,4,9.2 | Qualigen |
| 8. | Bromine | Qualigen |
| 9. | Benzamide | Qualigen |
| 10. | Barium Chloride | Qualigen |
| 11. | Blue & Red litmus paper | Qualigen |
| 12. | Benzoyl chloride | Qualigen |
| 13. | Chloroform | Qualigen |
| 14. | Cyclohexane | Qualigen |
| 15. | Cerric ammonium nitrate | Qualigen |
| 16. | Calcium chloride (anhydrous) | Qualigen |
| 17. | Carbon tetrachloride | Qualigen |
| 18. | Chromatography Paper | Qualigen |
| 19. | Cupric carbonate | Qualigen |
| 20. | Copper foil | |
| 21. | Dimethyl glyoxime | Qualigen |
| 22. | Ethyl acetate | Qualigen |
| 23. | Ethyl methyl amine | Qualigen |
| 24. | Ethyl methyl ketone | Qualigen |
| 25. | Fructose | Qualigen |
| 26. | Ferric ammonium sulphate | Qualigen |
| 27. | Ferrous ammonium sulphate | Qualigen |
| 28. | Ferrous sulphide sticks for kipp's | Qualigen |
| 29. | Glacial acetic acid | Qualigen |
| 30. | Hydroxyl amine | Qualigen |
| 31. | Iodine | Qualigen |

| | | |
|-----|---|----------|
| 32. | Isopropyl alcohol | Qualigen |
| 33. | Lactose | Qualigen |
| 34. | Lead nitrate | Qualigen |
| 35. | Methanol | Qualigen |
| 36. | Methyl acetate | Qualigen |
| 37. | n-hexane | Qualigen |
| 38. | Nickel aluminium sulphate | Qualigen |
| 39. | n-butanol | Qualigen |
| 40. | Nessler's reagent | Qualigen |
| 41. | o-Nitro phenol | Qualigen |
| 42. | o-amino phenol | Qualigen |
| 43. | Oxalic acid | Qualigen |
| 44. | P-amino phenol | Qualigen |
| 45. | Phenyl hydrazine | Qualigen |
| 46. | Potassium chloride | Qualigen |
| 47. | Potassium iodide | Qualigen |
| 48. | Potassium nitrate | Qualigen |
| 49. | P-nitro phenol | Qualigen |
| 50. | Silica gel (coarse) | Qualigen |
| 51. | Silica gel – G | Qualigen |
| 52. | Sodium acetate | Qualigen |
| 53. | Sodium bisulphite | Qualigen |
| 54. | Sodium nitrate | Qualigen |
| 55. | Sodium chloride | Qualigen |
| 56. | Silver nitrate | Qualigen |
| 57. | Strontium chloride | Qualigen |
| 58. | Strontium nitrate | Qualigen |
| 59. | Sodium bromide | Qualigen |
| 60. | Sulphuric acid | Qualigen |
| 61. | Sucrose | Qualigen |
| 62. | Thionyl chloride | Qualigen |
| 63. | Tyrosine | Qualigen |
| 64. | Zinc dust | Qualigen |
| 65. | Calcium nitrate | Qualigen |
| 66. | Burner (Brass) without stopcock with heavy base | |
| 67. | Burette brush | |
| 68. | Capillary tube for T.L.C | |
| 69. | Capillary tube for M.P determination | |
| 70. | Calibrated pipette 5ml, 10ml | Borosil |
| 71. | Charcoal Block | |
| 72. | Propipette (5ml , 10ml) | |
| 73. | Stoppered brown bottle 500 ml. 250 ml. | Borosil |
| 74. | Spatulla | |
| 75. | Starch Iodide paper | |

| | | |
|-----|---|-------------------------------|
| 76. | Triangular file | |
| 77. | Tubes flat bottom with screw cap 30ml capacity 25X95 50ml capacity 25X145 | Borosil 9910010 9910012 |
| 78. | Glass Slide for T.L.C | |
| 79. | Tongue 10" | |
| 80. | Watch gars 6" dia | |
| 81. | Thermometer 1/10 Deg. Celsius | |
| 82. | Silicone tube for distillation unit 8mm X 12mm O.D 6mm X 9 mm | Borosil |
| 83. | Porcelain Basin 6" dia bothsides glazed | |
| 84. | Narrow Mouth Bottle (LDPE) 4 lit 2 lit | Tarson |
| 85. | Pinch cock spring type | |
| 86. | Parafilm (M) 4" X 125' | 380020 |
| 87. | Handypette pipette aid (10ml) | Tarson |
| 88. | Pipette bulb (Tarson) | |
| 89. | Sucrose | Qualigen |
| 90. | Isopropyl alcohol | |
| 91. | Silica Vaccum grease | |
| 92. | Aluminium Silica plate for T.L.C | |
| 93. | Animal Charcoal | |

INFRASTRUCTURE

| SL.NO. | NAME OF THE ITEM | MAKE |
|--------|---|--------|
| 1. | Lab Table Wallside with sink, granite top and storage Size – 14' X 2 ½ ' X 3' | Godrej |
| 2. | Easy adjustable rack six shelves | Godrej |
| 3. | Sliding glass doors with aluminum channel on the shelves | |

PHYSICS

APPARATUS

| SL. NO. | NAME OF THE APPARATUS | SPECIFICATION |
|---------|--|--|
| 1. | Susceptibility of paramagnetic solution by Quink's tube method | Indosaw Sk-069 |
| 2. | Hall coefficient of semi-conductor sample | Indoswa Sk-006 |
| 3. | Dielectric constant of Dielectric materials with frequency | |
| 4. | CRO with dual trace, 20 MegaHz | <ul style="list-style-type: none"> • Scientific • Scientek |
| 5. | Function generator, 1 MegaHz, 2MHz | Omega FG 323 , FG 322 Frequency range 02Hz – 1MHz 02Hz – 2MHz |
| 6. | Battery Eliminator 0-12V | Mars |
| 7. | Magnetic Susceptibility of Solids | |
| 8. | BH curve of Fe by using solenoid (energy loss from Hysteresis curve) | Omega ES – 320 Indosaw Sk-182 |
| 9. | Polarimeter Research type for sugar solution | |
| 10. | Elliptically polarized light by using Babinets compensator | Besto 1541 |
| 11. | Determination of λ and velocity of ultrasonic wave in liquid (kerosene oil) to study the diffraction pattern through ultrasonic grating, spectro meter L.C – 10" | |
| 12. | R.I of glass & liquid by total internal reflection using Gaussion eyepiece | |
| 13. | R.I. of liquid by total internal reflection using wollaston's airfilm | |
| 14. | Boltzmann constant using V-I characteristics of P-N junction diode | NISCO |
| 15. | To verify malus law for plane polarized light | |
| 16. | Build Flipflop (RS, Clocked RS D type JK circuits using NAND gale) | Besto 2062 |
| 17. | Half adder, Full adder and 4 Bid Binary adder | Besto 2059 |
| 18. | Half subtractor, Full subtractor using Full adder IC | |
| 19. | Meterbridge with series and parallel | Omega ES 223 |
| 20. | Specific resistance of wire by meter bridge | Omega Es 222 |
| 21. | Leclanche cell with electrodes | |
| 22. | Frquency of the main with Sonometer | |
| 23. | Travelling microscope LC – 0.001 cm | NISCO |
| 24. | DCC wire SWG 24 | 100 gm |
| 25. | Boolean expression into logic circuit and design it logic gate ICs | |
| 26. | λ of He-Ne LASER light by diffraction grating, single slit , double slit | |

INFRASTRUCTURE

| SL. NO. | NAME OF THE APPARATUS | SPECIFICATION |
|---------|--------------------------|--|
| 1. | Storewell Plain (Godrej) | 1981H X 916W X 486 D mm (6.5'X3'X18") |
| 2. | Lab Table | 5' X 3' X3' granite top Godrej Make |

CHEMICALS & GLASSWARE

| SL. NO. | NAME OF THE APPARATUS | SPECIFICATION |
|---------|--|---------------|
| 1. | Cylindrical measuring glass Jar (Borosil) 25ml, 50ml, 100ml | Borosil |
| 2. | Ammonium Chloride 500gm | Qualigen |

REQUIREMENTS OF DEPT. OF BOTANY

LAB CHEMICALS

1. glycerine
2. light green S.F
3. fast green
4. butanol
5. chloroform
6. paraffin
7. dioxan
8. potassium tartarate
9. lime water
10. KOH solution
11. Barium hydroxide
12. Glucose solution
13. Feulgen stain
14. HCl
15. Sodium hydroxide
16. Sodium carbonate
17. Acetocarmine powder
18. Canada balsam
19. Tryptone
20. Yeast powder
21. Trichloric acid
22. Trichloroacetic acid
23. Euparal
24. $MnSO_4$
25. phosphoric acid
26. ferrous ammonium sulphate
27. ammonium thiocyanate
28. hydrogen peroxide
29. silver nitrate
30. formaline
31. lactophenol
32. iron-alum
33. chromic acid
34. barium chloride
35. diphenyl amine reagent
36. n- butanol
37. diphenylamine
38. acetate buffer
39. sodium citrate
40. $KMnO_4$
41. Ferric chloride
42. Starch powder
43. Gualacol
44. Phosphate buffer
45. Sodium fluoride
46. Lead acetate
47. Sodium iodide
48. $K_2Cr_2O_7$
49. dimethyl amine
50. DNA stranded (calf-thymus)
51. Furfural
52. $FeCl_3$
53. Sodium citrate
54. Orcinol reagent
55. Bultured solution
56. Anthrone reagent
57. Bovine serum albumin
58. Sodium potassium tartarate
59. Ninhydrin solution
60. Tartarate
61. Hydrogen peroxide solution
62. Methyl alcohol
63. Ethyl ether
64. $CaCO_3$
65. Phenolphthaline
66. Oxalic acid
67. Phlorglucine
68. Acetic acid
69. RNAase
70. Sodium doulcylsulphate
71. TE buffer
72. Proteinase
73. EDTA

- 74. Perchloric acid
- 75. Blood Group Testing Kit

LAB CLASSWORK MATERIALS

A. PERMANENT SLIDES : (Rate per Slide)

- a) bryophytes
- b) Algae
- c) Fungi
- d) Pteridophytes
- e) Fossils

B. CLASS ROOM PLANT SPECIMENS

(Rate per vial)

- a. Algae
- b. Fungi
- c. Bryophytes
- d. Pteridophytes
- e. Lichens
- f. Gymnosperms

INSTRUMENTS and GLASSWARES

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Test-tube 2. Test-tube holder 3. Spirit lamp 4. Slides 5. Coverslip 6. Water bath(Big) 7. Simple microscope 8. Compound microscope(Olympus,HSA/monocular) 9. Petridish(of all sizes) 10. Blotting papers 11. Glass rod 12. Beaker(100,250,500ml) 13. Micrometer | <ul style="list-style-type: none"> 14. Wiregauge 15. Mortar pestle 16. Watch glass 17. Measuring cylinder(10,50,100,500,1l,5l) 18. Conical flask(50,100,500,1l,5l) 19. Pipet 20. Table top centrifuge 21. Ependrof tube 22. plastic Burette 23. incubator 24. funnel 25. volumetric flask 26. vertex mixer 27. gangon's photometer 28. lux meter 29. muslin cloth 30. maximum and minimum thermometer 31. soil thermomter 32. glass curvate 33. psychrometer 34. pH meter 35. cup anemometer 36. rain gauge 37. calorimeter 38. stirring rod 39. hammer 40. white tile cavity 41. wilmott's bubbler 42. manometer 43. T/A apparatus 44. Burette stand 45. Collection bottles 46. Volumetric flasks 47. Quadrat 48. Chromatography paper 49. Microtip box 50. Cork borer 51. Darwin potometer |
|---|--|

52. Centigrade thermometer
53. Coloured cellophane paper
54. Gelatin
55. Pinch cock
56. Rubber tube
57. Tubular glass
58. Co₂ generator
59. Pettenkoffer's apparatus
60. Dorafix
61. Calorimeter
62. Aspirator or air pump
63. Vaseline
64. Culture holder
65. Craft's chart cabinet (model BWE-12M ,BWE-13)
66. Long forceps (10 ")
67. Botany lab tray (12 x 10")
68. Glass Slides
69. Cover slip
70. Haemocytometer
71. Electron micrographs
72. Laminar flow (2' x 2' x 2' and 3' x 2' x 2')
73. Pippete
74. Micropippete : 0.5-10 μ m, 20-100 μ m, 2-00 μ m
75. Tips for micropippet : 0.2 – 10 μ m, 2-200 μ m

INFRASTRUCTURE (Per Running ft. rate)

1. Student's Working Table:

Wooden Frame with polished green marble top
 Material Specification: Sal wood frame with coffee enamel colour (asian/dulux). 1" marble thick ness. Top: 2'x2.5', Leg: 2.5"x2.5", Bahi: 4" Foot rest and leg connectors. Each table length 5-6ft.

2. Student's stool: Sal wood, enamel coloured as above (Sample available in the lab)

3. Craft's chart cabinet (model BWE-12M ,BWE-13)

CHARTS

(Bio Visual Company Only)

1. Anatomy of stem: monocot (*Zea mays*).
2. Anatomy of stem: dicot (*Helianthus annus*).
3. Anomalous of secondary growth.
4. Xerophytes: leaf and stem
5. Plant tissue: collenchyma
6. Anatomy of leaf: monocot (*Zea mays*).
7. Anatomy of leaf: dicot (*Helianthus annus*).
8. Canna: root
9. Chlamydomonas
10. Canna stem
11. Family Orchidaceae
12. Rhizopus
13. Secondary growth (*Casuarina* and *Mirabilis* stem)
14. Oscillatoria
15. Dicot embryo: development
16. Oedogonium: reproduction
17. Secondary growth (*Bignonia* and *Strychnos* stem)
18. Vascular Bundles type
19. Nostoc
20. Anatomy of root: dicot (*Helianthus annus*).
21. Normal secondary growth (dicot stem).
22. Plant tissue: Xylem
23. Anatomy of monocot stem: (*Zea mays*).
24. Secondary growth (*Boerhaavia* & *Nyctanthes* stem).

25. Plant tissue: Sclerenchyma.
26. Anatomy of leaf: monocot.
27. Stem modification: Aerial
28. Family Poaceae.
29. Anatomy of leaf: dicot (Helianthus annuus).
30. Family Fabaceae
31. Plant tissue: Collenchyma.
32. Plant tissue: Parenchyma.
33. Ectocarpus.
34. Plant tissue: phloem.
35. Carbon cycle.
36. Dihybrid ratio.

Rashmi
18/10/12

ZOOLOGY

Requirements in Infrastructure and Chemicals 2017-18

INFRASTRUCTURE

| SL. NO. | ITEM | SPECIFICATION | REQUIRED |
|---------|--|--|----------|
| 1. | Godrej Glass Door Storwell | Code – 93640323 | 3 nos. |
| 2. | Students Wooden sitting stools for lab [Legs of Stools joined] | HI – 20" + 1" = 21" Seat area sqft. = 15" | 30 nos. |
| 3. | Neelkamal Plastic chairs for department | MID BACK CHAIR RED/Pearl wood Code – CHR2060 | 20 nos. |

CHEMICALS AND GLASSWARES

| SL. NO. | ITEM | SPECIFICATION | REQUIRED |
|---------|---|---------------------|----------|
| 1. | Laboratory set clear plastic droppers | Uxcell | 100pcs |
| 2. | Benedict's Solution (Qualitative) 500ml | 500ml | 20 nos. |
| 3. | Potassium Iodide N/10 | 125ml | 10nos. |
| 4. | Phenolphthaline Solution 1% | 125ml | 10nos. |
| 5. | Blue Star Cover slip | Standard | 5pkts |
| 6. | Borosil spirit lamp | Standard | 10 nos. |
| 7. | p ^H paper | p ^H 2-10 | 10 pkts. |
| 8. | Starch powder | Lab use | 1 kg |
| 9. | Soyabean powder | Lab use | 1 kg |

DEPARTMENT OF GEOLOGY 2017-18

| EQUIPMENT | |
|-----------|--|
| Sl. No | Name of the instruments |
| 1. | Binocular petrological microscope (of csiccensico company) |
| 2. | GPS (of Germi or Etrex company) |

| GLASSWARE | | |
|-----------|--|----------------|
| Sl. No | Name of specimens | No of Specimen |
| 1. | <u>Minerals</u> Olivine, sodalite, leucite, nepheline, hornblende, tremolite, actinolite, silimanite, kyanite, tourmaline, rhombohedral calcite, azurite | 12 |
| 3. | <u>Industrial minerals</u> Asbetos, graphite, magnesite, fire clay, china clay, kaoline | 6 |
| 4. | <u>Rock specimen</u> A. Igneous rocks (syenite, diorite, granodiorite, pegmatite, gabbro, dolerite, basalt, peridotie, dunite) B. Sedimentary rocks (sandstone, conglomerate, breccia, limestone, dolomite, arkose, greywacke) C. Metamorphic Rocks (khondalite, basic granulite, granite-gneiss, granulite) | 20 |
| 5. | <u>Rock slide</u> A. Igeous rock (diorite, dolerite, granodiorite, gabbro, anorthsite, basalt, trachayte, lamprophyre) B. Sedimentary rock (sandstone, conglomerate, breccia, limestone, shale) C. Metamorphic rock (khondalite, charnokite, gneiss) | 16 |
| 6. | <u>Geomorphic models</u> Morain, yardang, dunes, roches mountain, meandering river, mesa, butte, cuesta, pedestal rock, v's rule model) | 10 |
| 7. | <u>Fossils</u> Trilobita - Phillipsia, paradoxsides Brachiopoda - Rhynconella, productus Pelecypoda - Arca, Cardita Gastropoda - Murex, Physa Cephalopoda - Ammonoidea, Nautiloid | 10 |