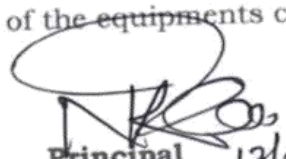


OFFICE OF THE PRINCIPAL
GOPALPUR COLLEGE, GOPALPUR, BALASORE

e-Mail ID gcbls1978@gmail.com Contact No. 9938975063


~~Quotations~~ Quotations for supply of Scientific Equipments / Accessories and Chemicals are invited by the Undersigned as per Government Rate to reach at the Office in College e-Mail address **on or before 18.05.2019** . The detailed list of the equipments chemicals are given in the college website www.gopalpurcollege.in.


Principal 13/05/19
Gopalpur College, Gopalpur, Balasore

DEPARTMENT OF CHEMISTRY

LIST OF NEW EQUIPMENTS
GOPALPUR COLLEGE, GOPALPUR, BALASORE

Sl. No.	Name of New Equipments	Qty.	Rate in Rs.
1	STATAGMO METER	16	
2	OSTWALD'S VISCO METER	16	
3	STOP WATCH	16	
4	PH METER (DIGITAL)	16	
5	PH POTENTIO METER	2	
6	MELTING POINT APPARATUS (DIGITAL)	16	
7	BOILING POINT APPARATUS (DIGITAL)	3	
8	PAPER CHROMATOGRAPHY	4	
9	THIN LAYER CHROMATOGRAPHY	4	
10	CALORI METER	10	
11	THERMO FLASK	10	
12	BECKMANN THEROMO METER	16	
12	OSTWALD'S CALORY METER	10	
13	CHEMICAL BALANCE (DIGITAL)	2	
14	DESICCATOR	5	
15	WHATMAN FILTER PAPER	5	
16	CONDUCTIVITY METER	10	
17	CONDUCTIVITY CELL	10	
18	THERMO STAT	10	
19	HEAD PHONE	10	
20	REGISTANCE BOX	10	
21	2 VOLT BATTERY	10	
22	INDUCTION COIL	10	
23	WHEAT STONE BRIDGE	10	
24	POTENTIO METER	10	
25	BATTERY	10	
26	STANDARD CELL	10	
27	CALOMEL ELECTRODE	10	
28	PLATINUM ELECTRODE	10	
29	QUINO HYDRONE ELECTRODE	10	
30	MICRO BURETTE	10	
31	CENTRI FUGAL MACHINE (ELECTRIC)	5	




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LIST OF CHEMICALS & GLASS WARES

DEPARTMENT OF CHEMISTRY

SL. NO.	LIST OF CHEMICALS & GLASS WARES	QTY.
1	SODIUM ACETATE	2
2	AMMONIUM HYDROXIDE	2
3	ACETIC ACID	2
4	AMMONIUM CHLORIDE	2
5	OXALIC ACID	2
6	KMNO ₄ (POTASSIUM PERMANGANATE)	2
7	SOD. HYDROXIDE PELLETE	2
8	CONE H ₂ SO ₄	2
9	CONE HCl	2
10	CONE HNO ₃	2
11	GLACIAL ACETIC ACID	2
12	SOD. THIOSULPHATE	2
13	STANOUS CHLORIDE	2
14	POTASSIUM IODIDE	2
15	SODIUM OXALATE	2
16	POTASSIUM DICHROMATE	2
17	STARCH	2
18	SOD CARBONATE	2
19	BARIUM CHLORIDE	2
20	SOD BICARBONATE	2
21	BLEACHING POWDER	2
22	FERROUS SULPHATE	2
23	MOHR'S SALT	2
24	N-PHENYLANTHRANILIC ACID	2
25	BENZOIC ACID	2
26	ACETYNILIDE	2
27	P-NITROPHENOL	2
28	ETHANOL	2
29	CITRIC ACID MONOHYDRATE	2
30	MALEIC ACID	2
31	GLYCINE	2
32	L-ALALINE	2
33	ORTHO AND PARA NITROPHENOL	2
34	O & P - AMINO PHENOL	2
35	GLUCOSE	2
36	LACTOSE	2
37	POTASSIUM NITRATE	2
38	COPPER SOLPHATE	2
39	CUSO ₄ . 5H ₂ O	2
40	ANHYDROUS CUSO ₄	2
41	PHENOLAPHTHLIN	2
TOTAL =		

LIST OF CHEMICALS & GLASS WARES

DEPARTMENT OF CHEMISTRY

SL. NO.	LIST OF CHEMICALS & GLASS WARES	QTY.
1	IODINE	1
2	SO. SULPHITE	1
3	CUCL ₂ .H ₂ O	1
4	MANGANESE (II) NITRATE	1
5	PHOSPHORIC ACID	1
6	ACETONE	1
7	ALUMINIUM SOLPHATE	1
8	POTASSIUM SOLPHATE	1
9	PHENOL	1
10	PROPANAL	1
11	ACETALDEHYDE	1
12	BENZALDEHYDE	1
13	ANILINE	1
14	O., & P - TOLUIDINE	1
15	L & B - NAPHTHOL	1
16	SALICYLIC ACID	1
17	RESORCINOL	1
18	P-CRESOL	1
19	NITROBENZENE	1
20	CYCLOHEXANE	1
21	250ML BOTTLE	1
22	TITRATION FLASK	1
23	CARBON TETRACHLORIDE	1
24	METHYL ACETATE	1
25	REACTION BOTTLE	1
26	ETHYLACETATE	1
27	ACTIVATED CHARCOAL	1
28	FUNNEL	1
29	GLAZED PAPER	1
30	DIMETHYL GLYOXIME	1
31	NICKEL AMMONIUM PHOSPHATE	1
32	COPPER AMMONIUM DIOXIDE	1
33	AMMONIUM THIO CYANATE	1
34	AMMONIUM BISULPHITE	1
35	BUCHNER FUNNEL	1
36	FERRIC HYDROXIDE	1
37	OXINE (8-HYDROXY QUINOLINE)	1
38	SINTERED GLASS CRUCIBLE	1
39	GLASS JAR WITH COVER	1
40	THIN CAPILLARY TUBE	1
41	CO (II) SALT	1
42	NICKEL (II) SALT	1
43	CUPRIC OXIDE	1
44	DELIVERY TUBE	1
45	CALCIUM HYDROXIDE	1
46	SOD. NITROPRUSSIDE	1
47	ACETAMIDE	1

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LIST OF CHEMICALS & GLASS WARES
DEPARTMENT OF CHEMISTRY

48	UREA	1
49	BENZAMIDE	1
50	PHTHALIMIDE	1
51	LEAD ACETATE	1
52	BENZENE SULPHONIC ACID	1
53	THIOUREA	1
54	CARBONDISULPHIDE	1
55	SIVERNITRATE	1
56	SODIUM METAL	1
57	IODOFORM	1
58	CHLORAL	1
59	P-DICHLOROBENZENE	1
60	ZINC DUST	1
61	CALCIUM CHLORIDE	1
62	CHLOROFORM	1
63	SOD. NITRITE	1
64	POTASSIUM HYDROXIDE	1
65	SODALIME	1
66	BENZYLALCOHOL	1
67	CERIC AMMONIUM NITRATE	1
68	PROPAN-2-1 (ISO PROPHLALCOHOL)	1
69	TERTIEMY HVTYL ALCOHOL	1
70	FERRIC CHLORIDE	1
71	PHTHALEIC ANHYDRIDE	1
72	2,4- DNPH	1
73	SCHIFF'S REAGNT	1
74	TOLLEN'S RENGENT	1
75	FEBLING SOLUTION	1
76	POTASSIUM CHLORIDE	1
TOTAL =		

GLASS WARES


Sl.No.	Name of Items	Qty.
1	Test Tube	5
2	Weighing Bottles	16
3	Watch Glass	20
4	Beaker (Diff.Vol.)	50
5	Measuring Flask (Diff.Vol.)	20
6	Burettee (10cc/25cc)	20
7	Pipette (10cc / 25cc)	20
8	Reagent Bottle (150cc)	100
9	Glass Jar	10

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LIST OF CHEMICALS & GLASS WARES
DEPARTMENT OF CHEMISTRY

SL. NO.	LIST OF CHEMICALS & GLASS WARES	QTY.
1	ACETIC ANHYDRIDE	1
2	P-AMINO PHENOL	1
3	MAGNESIUM NITRATE	1
4	MAGNESIUM CHLORIDE	1
5	AL - 6H ₂ O	1
6	PROPYL AMINE	1
7	DIMETHICONE	1
8	AL COH ₃	1
9	WIG'S SOLUTION	1
10	EDTA	1
11	BAS04	1
12	PB SO ₄	1
13	ALUMINIUMOXIDE	1
14	W. BLUE GLASS	1
15	REAGENT DROPPER	1
16	SEMIMICRO BOILING TUUBES	1
17	CENTRIFUGE TUBE	1
18	CAPILLERY DROPPER	1
19	SEMIMICROBURNER	1
20	HOT AIRBATH	1
21	SEMI MICRO SPATULA	1
22	BASIC LEAD ACETRITE	1
23	DECOLOURISING CARBON	1
24	DIAPER	1
25	BOWL	1
26	FORMALDE HYDE	1
27	PHENYL HYDRARINE	1
TOTAL =		


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DEPARTMENT OF CHEMISTRY

LIST OF INFRASTRUCTURE REQUIREMENT

GOPALPUR COLLEGE, GOPALPUR, BALASORE

Sl. No.	Name of New Equipments	Qty.	Rate in Rs.
1	ALLMIRAH	2	
2	FIRE-EXINGUISTER	2	
3	MAGNETIC CERAMIC WHITE BOARD	1	
4	FEBRIC PIN UP NOTICE BOARD WITH SLIDING GLASSDOOR	1	
5	WALL LITERATURE HOLDER	1	
6	LECTURERS TABLE	1	
7	CHAIR (STEEL FRAME WITH FOAM)	5	


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GOPALPUR COLLEGE, GOPALPUR, BALASORE

DEPARTMENT OF ZOOLOGY


EQUIPMENTS & CHEMICALS REQUIRED

SL.NO.	ITEMS	QTY.
1	VISIBLE SPECTROPHOTO METER (AN-V) 1000 N	1
2	DIGITAL DISSOLVED OXYGEN METER	1
3	MICRO OVEN	1
4	COMPOUND MICRO SCOPE (BLISCOMAKE)	3
5	MICRO PIPETTE	3
6	BOD BOTTLE	10
7	CONICAL FLAXK	10
8	MEASURING CYLINDER	5
9	MUSEUM SPECIMEN	50
10	(PRESERVED) INVERTEBRATE & VERTEBRATES BIOLOGICAL CHART	15
11	FOSSILE SLIDE	5
12	PERMANENT SLIDE	50
13	DNA & RNA MODEL	2
14	MOLISH'S REAGENT	125 ML.
15	IODINE CRYSTALS	100 GM.
16	SULPHOSALI CYLIC ACID	100 GM.
17	SIDIUM NITRATE	500 GM.
18	BORAX CARMINE	125 ML.
19	LEISHMAN'S STAIN	250 ML.
20	EOSIN STAIN	125 ML.
21	IODINE SOLUTION	125 ML.
22	FERRIC CHLORIDE	500 ML.
23	ETHANOL	100ML.

LAB.INFRASTRUCTURE

SL.NO.	PARTICULARS	QTY.
1	OFFICE TABLE	2
2	RECK	2
3	ALMIRAH	2
4	OFFICE CHAIR	5
5	SKELETON STAND	1
6	WALL RECK GLASS FITTINGS	120SQ.FT.

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DEPARTMENT OF BOTANY

Requirement for Laboratory development

Sl. No.	Name of the Items	Quantity
1.	Almirah	3 pcs
2.	Rack	4 pcs
3.	Experiment Table	1 Pcs
4.	Wall Literature Holder	1 pcs
5.	Water Connection	

Rajiv Lenka

**Signature of the H.O.D.
Deptt. Of Botany**


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DEPARTMENT OF BOTANY

New Equipments & Microscopes

Sl. No.	Name of the Equipments	Quantity
1.	Compound microscope	4 Nos.
2.	Auto Clave	1 No.
3.	Bacteria Logical incubator	1 No.
4.	Soil Thermometer	3 No.
5.	Lux Meter	3 No.
6.	Spectro Photometer	1 No.
7.	Culture tube (10 ml.)	24 Nos.
8.	Culture tube (30 ml.)	12 Nos.
9.	PH Comparator Disc	1 No.
10.	Liminator air plug	1 No.
11.	Measuring Cylinder (100 ml.)	10 No.
12.	Measuring Cylinder (10 ml.)	10 No.
13.	Conical flask (500 ml.)	10 No.
14.	BOD Bottle	5 No.

Rajiv Lenka

**Signature of the H.O.D.
Deptt. Of Botany**


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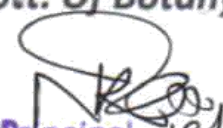
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DEPARTMENT OF BOTANY

Chemicals, Specimen, Plant Material, Charts

<i>Sl. No.</i>	<i>Name of the Items</i>	<i>Quantity</i>
1.	Specimens (Preserved)	40 No.
2.	Biological Chart	40 No.
3.	Plant Materials	50 No.
4.	Permanent Slide	100 No.
5.	Biological Model	10 No.
6.	Malachite Green	1 No.
7.	Ethylene Oxide	1 No.
8.	Bovine albumin	1 No.
9.	Beef extract	1 No.
10.	Agar Agar	1 No.
11.	Peptone	1 No.
12.	Alpha – Naphthol	1 No.
13.	Ammonium Sulphate	1 No.
14.	Ninhydrin	1 No.
15.	Osmic acid	1 No.
16.	K I	1 No.
17.	Na-K Tartarate	1 No.
18.	Lead acetate	1 No.
19.	MnSO ₄	1 No.
20.	Na ₂ CO ₃	1 No.
21.	CuSO ₄	1 No.
22.	Sudan – I, II, III	3 No.
23.	Anthrone reagent	1 No.
24.	Na ₂ HPO ₄	1 No.

Rajiv Lenka Signature of the H.O.D.
Deptt. Of Botany


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DEPARTMENT OF PHYSICS

LIST OF EQUIPMENTS

Department of PHYSICS (CBCS SYLLABUS EXPERIMENTS)			
Sl.No.	Name of the Experiments:-	Qty.	Remarks
1.	To determine the height of a building using a Sextant: Complete Setup.	2	
2.	To study the Motion of Spring and calculate (a) Spring constant, (b) g and (c) Modulus of rigidity.	2	
3.	Fly wheel: Moment of Inertia. Complete Set up with Digital Stop Clock (DSC-602), Vernier Calipers & Slotted weights with Hanger. Model-ES-323.	2	
4.	To determine g and velocity for a freely falling body using Digital Timing Technique Complete Set.	2	
5.	To determine Coefficient of Viscosity of water by Capillary Flow Method (Poiseuille's method). Complete Set.	2	
6.	To determine the Young's Modulus of a Wire by Optical Lever Method. Complete Set.	2	
7.	To determine the Modulus of Rigidity of a Wire by Maxwell's needle.	2	
8.	To determine the elastic Constants of a wire by Searle's method. Complete Set.	2	
9.	To determine the value of g using Bar Pendulum. Brass Chromium plated, Rectangular 100cm long with wall bracket & knife edge.	2	
10.	To determine the value of g using Kater's Pendulum: With two sets of large & small weights, two knife edges & a wall bracket. 100cm long x 12mm dia.	2	
11.	Use a Multimeter for measuring (a) Resistances, (b) AC and DC Voltages, (c) DC Current, (d) Capacitances, and (e) Checking electrical fuses. Complete Set.	2	
12.	To determine an unknown Low Resistance using Potentiometer. The setup consists of the following parts: Complete Set.	2	
13.	To determine an unknown Low Resistance using Carey Foster's Bridge. Complete Set.	2	
14.	To compare capacitances using De'Sauty's bridge. The setup for Desauty bridge consists of compact unit with builtin oscillator (fix frequency 1KHz, variable amplitude) and builtin speaker for null detection. All the ratio dials of resistance & capacitance arte provided on board. Provided with 5 values of unknown condenser inductor on board	2	
15.	Measurement of field strength B and its variation in a solenoid (determine dB/dx) :Complete Set.	2	
16.	To verify the Thevenin and Norton theorems, Superposition, and Maximum power transfer theorems: Model No.ETB-201. Complete Set.	2	
17.	To determine self-inductance of a coil by Anderson's bridge. ETB-31.	2	
18.	To study response curve of a Series LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance, (c) Quality factor Q, and (d) Band width.	2	
19.	Measurement of charge and current sensitivity and CDR of Ballistic Galvanometer Complete Set.	2	
20.	Determine a high resistance by leakage method using Ballistic Galvanometer. Complete set.	2	
21.	To determine self-inductance of a coil by Rayleigh's method. Complete Set.	2	

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22.	To determine the mutual inductance of two coils by Absolute method. Complete Set.	2	
23.	To determine the frequency of an electric tuning fork by Melde's experiment and verify $\lambda \propto T^{-1}$ law. Model No.ES-276.	2	
24.	To determine wavelength of sodium light using Fresnel Biprism. Model- ES-283	2	

Sl.No.	Name of the Experiments:-	Qty.	Remarks
25.	To determine wavelength of sodium light using Newton's Rings. ES-249.	2	
26.	To determine dispersive power and resolving power of a plane diffraction grating. ES-282.	2	
27.	To determine Mechanical Equivalent of Heat, J, by Callender and Barne's constant flow method. ES-227. Complete Set.	2	
28.	To determine the Coefficient of Thermal Conductivity of Cu by Searle's Apparatus. ESH 57. Complete Set.	2	
29.	To determine the Coefficient of Thermal Conductivity of a bad conductor by Lee and Charlton's disc method. ESH 56. Complete Set.	2	
30.	To determine the Temperature Coefficient of Resistance by Platinum Resistance Thermometer (PRT). ES- 354 Complete Set.	2	
31.	To study the variation of Thermo-Emf of a Thermocouple with Difference of Temperature of its Two Junctions. ES-231.	2	
32.	To determine J by Calorimeter. ES-213.	2	
33.	To study V-I characteristics of PN junction diode and light emitting diode: Model No.ETB-68. OMEGA Make. Complete Set.	2	
34.	To study V-I characteristics of a Zener Diode and Its use as voltage Regulator: Model No. ETB-106. OMEGA Make. Complete Set.	2	
35.	To study V-I & power curves of solar cells and find maximum power point & efficiency. Model No. ES-290. OMEGA Make.	2	
36.	Digital to Analog converter (DAC): Model No. LTB-813.	2	
37.	Analog to digital converter (ADC):Model No. LTB-812.	2	
38.	To show the tunneling effect in tunnel diode using I-V characteristics.	2	
39.	Measurement of susceptibility of paramagnetic solution (Quinck's Tube Method) ES-247.	2	
40.	To measure the Dielectric Constant of a dielectric Materials with frequency by lecher wire. ES-318.	2	
41.	To draw the BH curve of Fe using Solenoid & determine energy loss from Hysteresis.DB-002	2	
42.	To measure the resistivity of a semiconductor (Ge) with temperature by four-probe method and to determine its band gap. ES-246	2	
43.	To determine the Hall coefficient of a semiconductor sample.ES-248.	2	
44.	To verify and design AND, OR, NOT and XOR gates using NAND gates. LTB-805.	2	
45.	Half adder, Full adder and 4-bit Binary Adder. LTB-860.	2	

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46.	To design an astable & Monostable multivibrator of given specifications using 555 Timer. Model- ETB-141.	2	
47.	To study the characteristics of a Transistor in CE configuration. ETB-52.	2	
48.	To design a non-inverting amplifier of given gain using Op-amp 741 and study its Frequency Response. Other Apparatus Required. AF Generator, AC Millivolt meter, Digital Multimeter & without a CRO. ETB-155.	2	
49.	CRO.: Dual Trace 20MHz, CRO-20	2	
50.	To investigate the use of an op-amp as a Differentiator: Without CRO.	2	
51.	To design a Wien Bridge Oscillator using an op-amp. With Digital Frequency counter DFC-20M but Without CRO. ETB-193.	2	
52.	To verify the law of Malus for plane polarized light. ES-315.	2	
53.	To determine the specific rotation of sugar solution using Polari meter. ES-259.	2	
54.	To analyse elliptically polarized Light by using a Babinet's compensator. ES-324.	2	
55.	To determine the wavelength and velocity of ultrasonic waves in a liquid (Kerosene Oil, Xylene, etc.) by studying the diffraction through ultrasonic grating.	2	
56.	To determine the refractive index of liquid by total internal reflection using Wollaston's air-film.	2	
57.	To determine the refractive Index of (1) glass and (2) a liquid by total internal reflection using a Gaussian eyepiece.	2	
58.	To study the polarization of light by reflection and determine the polarizing angle for air glass interface.	2	
59.	Stefan's law of radiation by using an Incandescence lamp with power supply. ETB-190.	2	
60.	Determination of Stefan's constant. Complete Set. ES-230.	2	
61.	To determine the Boltzmann constant using V-I characteristics of PN junction diode. ETB-68/.	2	
62.	To determine the ionization potential of mercury. Complete Set. ETB-197.	2	
63.	To determine value of Planck's constant using LEDs of at least 4 different colours.	2	
64.	To study the diffraction patterns of single and double slits using laser and measure its intensity variation using Photo sensor & compare with incoherent source - Na. Complete Set. ES-361.	2	
65.	To determine the value of e/m by (a) Magnetic focusing Method. Complete with C.R.T., Power supply & focusing coils etc. EM-35.	2	
66.	To determine the value of e/m by Bar magnet Method. Complete with 3" C.R.T., Power supply, wooden stand, Magnetometer, & a pair of Bar Magnet. EM-30.	2	

LAB. INFRASTRUCTURE

SL.NO.	PARTICULARS	QTY.
1	OFFICE TABLE	2
2	OFFICE STOLE	32
3	DARK ROOM (ROUND) TABLE	1

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