

**DEPARTMENT OF BOTANY      GANJAM COLLEGE, GANJAM**  
**SESSION: 2024-25**  
**LABORATORY REQUIREMENTS**  
**GLASSWARES AND OTHER EQUIPMENTS**

SL.NO.	NAME	PRICE	QUANTITY	TOTAL AMOUNT
1	HP DESKTOP		1	
2	HP PRINTER CUM XEROX CUM SCANNER		1	
3	INCUBATOR(OVEN)		1	
4	DIGITAL BALANCE( milligram-gram)		1	
5	DIGITAL BALANCE( 1g -3KG)		1	
6	Thermometer for measuring water temp.		1	
7	Dessicator		1	
8	Soil thermometer		1	
9	Water analysis kit		1	
10	Soil analysis kit		1	
11	Blood group testing kit		1	
12	Ganong'sPotometer		6	
13	Farmers Potometer		6	
14	Willmott's bubbler		6	
15	T/A apparatus		6	
16	Glass funnel		2	
17	Spirit lamp		2	
18	Capillary tube		4	
19	Slit Cork for Chromatography		4	
20	Slide Box (large)		2	
21	Tripod stand		2	
22	Inoculation loop		1	
23	Steel almirah (Godrej) grey colour		1	
24	Rack		2	

25	DROPPER		4	
26	BLOTTING PAPER		1 PKT	
27	MUSLIN CLOTH		1	
28	BLUE, RED , YELLOW, GREEN CELLOPHANE PAPER		6	
29	SCISSORS		2	
30	BOTTLE CLEANING BRUSH		2	
31	COTTON		1 PKT	
32	TISSUE PAPER		2 PKT	
33	HAND GLOVES		2 PAIR	

### CHEMICALS

SL.NO.	NAME	PRICE	QUANTITY	TOTAL AMOUNT
1	AGAR-AGAR POWDER 50g		1	
2	ANHYDROUS SODIUM CARBONATE		1	
3	AMMONIUM SULPHATE		1	
4	AMMONIUM BIPHOSPHATE		1	
5	EPSOM SALT		1	
6	SODIUM CARBONATE		1	
7	CALCIUM CHLORIDE		1	
8	GLACIAL ACETIC ACID		1	
9	FAST GREEN		1	
10	COTTON BLUE		1	
11	POTASSIUM TARTARATE		1	
12	POTASSIUM IODIDE		1	
13	IODINE CRYSTAL		1	
14	AMYLASE		1	

15	CATALASE		1	
16	MILLONS REAGENT		1	
17	ZINC CHLORIDE		1	
18	METHYLENE BLUE		1	
19	SODIUM ACETATE		1	
20	GUAIACOL		1	
21	ALPHA NAPHTHOL		1	
22	ORCINOL		1	
23	ACETOCARMINE		1	
24	CHLOROFORM		1	
25	ABSOLUTE ALCOHOL		1	
26	SPIRIT		1	
27	PHOSPHATE BUFFER(PH-7.0)		1	
28	ACETATE BUFFER(PH-5.3)		1	
29	BORAX POWDER		1	
30	BORIC ACID		1	

#### PERMANENT SLIDES OF VEGETATIVE AND REPRODUCTIVE STAGES

SL.NO.	NAME	PRICE	QUANTITY	TOTAL AMOUNT
1	T.S OF HELIANTHUS STEM		1	
2	T.S. OF MAIZE STEM		1	
3	T.S. OF BOERHAAVIA STEM		1	
4	T.S. OF BIGNONIA STEM		1	
5	T.S. OF ACHYRANTHES STEM		1	
6	T.S OF NYCTANTHES STEM		1	
7	T.S. OF CASUARINA STEM		1	

8	T.S. OF BOUGAINVILLEA STEM		1	
9	T.S. OF DRACAENA STEM		1	
10	T.S. OF HYDRILLA STEM		1	
11	T.S. OF YOUNG ANTHER		1	
12	T.S. OF MATURE ANTHER		1	
13	L.S. OF OVULE		1	
14	L.S. OF MATURE DICOT EMBRYO		1	
<b>15</b>	<b>STAGES OF MITOSIS</b>			
	PROPHASE		1	
	METAPHASE		1	
	ANAPHASE		1	
	TELOPHASE		1	
<b>16</b>	<b>STAGES OF MEIOSIS (PROPHASE-I)</b>			
	LEPTOTENE		1	
	ZYGOTENE		1	
	PACHYTENE		1	
	DIPLTENE		1	
	DIAKINESIS		1	
<b>17</b>	<b>SLIDES OF OVULES</b>			
	ORTHOTROPUS		1	
	ANATROPUS		1	
	CIRCINITROPUS		1	
	AMPHITROPUS		1	
	CAMPYLOTROPUS		1	
	HEMIANATROPUS		1	
<b>18</b>	<b>STAGES OF DICOT EMBRYO</b>			
	HEART SHAPED		1	

	TORPEDO SHAPED		1	
19	<b>ALGAE</b>			
	CLAMYDOMONAS(W.M)		1	
	CLAMYDOMONAS PALMELLA STAGE		1	
	VOLVOX COLONY		1	
	CHLORELLA(W.M)		1	
	COLEOCHAETE THALLUS		1	
	OEDOGONIUM( VEGETATIVE)		11	
	OEDOGONIUM MACRANDRUS TYPE		1	
	OEDOGONIUM NANNANDROUS TYPE		1	
	VAUCHERIA THALLUS		1	
	VAUCHERIA REPRODUCTIVE STRUCTURE		1	
	CHARA VEGETATIVE THALLUS		1	
	CHARA WITH SEX ORGAN		1	
	ECTOCARPUS VEGETATIVE		1	
	ECTOCARPUS UNILOCULAR SPORANGIA		1	
	ECTOCARPUS PLURILOCULAR SPORANGIA		1	
	FUCUS VEGETATIVE THALLUS		1	
	T.S. OF CONCEPTACLE		1	
	BATRACHOSPERMUM VEGETATIVE		1	
	BATRACHOSPERMUM REPRODUCTIVE		1	
	LAMINARIA VEGETATIVE STRUCTURE		1	
	POLYSIPHONIA VEGETATIVE		1	
	POLYSIPHONIA MALE REPRODUCTIVE PART		1	
	POLYSIPHONIA FEMALE REPRODUCTIVE PART		1	

	POLYSIPHONIA CYSTOCARP		1	
	NOSTOC (W.M.)		1	
	DIATOM		1	
	PROCHLORON VEGETATIVE THALLUS		1	
<b>20</b>	<b>FUNGI</b>			
	RHIZOPUS VEGETATIVE STR.		1	
	RHIZOPUS SPORANGIA		1	
	ZYGOSPORE OF RHIZOPUS		1	
	YEAST		1	
	YEAST BUDDING		1	
	ASPERGILLUS CONIDIOPHORE WITH CONIDIA		1	
	PEICILLIUM CONIDIA ON CONIDIOPHORES		1	
	FRUITING BODY OF PENICILLIUM		1	
	NEUROSPORA VEGETATIVE		1	
	NEUROSOPORA CONIDIA		1	
	AGARICUS V.S. OF GILL		1	
	AGARICUS L.S. OF GILL		1	
	PUCCINIA UREDEOSPORES		1	
	PUCCINIA TELEUTOSPORE		1	
	PUCCINIA PYCNIOSPORE		1	
	PUCCINIA AECIOSPORES		1	
<b>21</b>	<b>BRYOPHYTA</b>			
	RICCIA THALLUS T.S		1	
	MARCHANTIA THALLUS T.S		1	
	MARCHANTIA GEMMA CUP		1	
	ANTHOCEROS THALLUS T.S.		1	

	T.S. OF STEM OF SPHAGNUM		1	
	L.S. OF MATURE SPOROGONIUM OF SPHAGNUM		1	
	T.S. OF STEM OF FUNARIA		1	
	FUNARIA CAPSULE L.S.		1	
<b>22</b>	<b>PTERIDOPHYTA</b>			
	PSILOTUM SYNANGIUM T.S.		1	
	LYCOPODIUM STROBILUS L.S.		1	
	SELAGINELLA STEM T.S.		1	
	SELAGINELLA STROBILUS L.S.		1	
	EQUISETUM STEM T.S.		1	
	EQUISETUM STROBILUS L.S.		1	
	MARSILEA STEM T.S.		1	
	MARSILEA SPOROCARP V.T.S.		1	
	PTERIS PROTHALLUS WITH YOUNG SPOROPHYTE		1	
	PTERIS PROTHALLUS WITH SEX ORGANS		1	
<b>23</b>	<b>GYMNOSPERM</b>			
	CYCAS CORALLOID ROOT T.S.		1	
	CYCAS LEAF T.S.		1	
	CYCAS MALE STROBILUS T.S.		1	
	PINUS STEM T.S.		1	
	PINUS NEEDLE T.S.		1	
	PINUS MALE CONE L.S.		1	
	PINUS FEMALE CONE L.S.		1	
	GNETUM STEM T.S.		1	
	GNETUM OVULE L.S.		1	

<b>24</b>	<b>PALEOBOTANY</b>			
	RHYNIA STEM T.S.		1	
	LEPIDODENDRON STEM T.S.		1	
	LYGINOPTERIS STEM T.S.		1	
	CALAMITES STEM T.S.		1	
	CYCADEOIDEA STEM T.S.		1	
	CYCADEOIDEA PINNULE T.S		1	
<b>25</b>	<b>LICHEN</b>			
	FOLIOSE LICHEN THALLUS T.S		1	
<b>26</b>	<b>MUSEUM SPECIMEN</b>			
	CRUSTOSE LICHEN		1	
	FOLIOSE LICHEN		1	
	FRUTICOSE LICHEN		1	
	PINUS MALE CONE		1	
	PINUS FEMALE CONE		1	
	CYCAS MALE CONE		1	
	CYCAS FEMALE CONE		1	



## CHEMISTRY LABORATORY EQUIPMENTS

### annexure-I

SL. No.	Name of items	units	quantity
1	Ammonium sulphate	500gm	1
2	Ferrous sulphate	500gm	1
3	Potassium sulphate	500gm	1
4	Ammonium chloride	500gm	1
5	Zinc carbonate	500gm	1
6	Sodium chloride	500gm	1
7	Potassium Chloride	500gm	1
8	Silvernitrate	25gm	1
9	Conc.HCl	2.5Ltr	1
10	Conc.H <sub>2</sub> SO <sub>4</sub>	2.5Ltr	1
11	Conc.HNO <sub>3</sub>	2.5Ltr	1
12	Potassium permanganate	500gm	1
13	NaHCO <sub>3</sub>	500gm	1
14	Sodium hydroxide	500gm	1
15	Sodium carbonate	500gm	1
16	Stronsium chloride	500gm	1
17	Ammonium hydroxide	2.5Ltr	1
18	Cerric ammonium nitrate	500gm	1
19	Calcium carbonate	500gm	1
20	Bariumchloride	500gm	1
21	Sod. Nitrate	500gm	1
22	Iod. Thiosulphate	500gm	1
23	Ferrous sulphide	1000gm	1
24	Aniline	500ml	1
25	Acetaldehyde	500ml	1
26	Acetone	500ml	1
27	Phenol	500gm	1
28	Ethanol	500ml	1
29	Acetic acid	500ml	1
30	FehlingA	500ml	1
31	FehlingB	500ml	1
32	Potassium permanganate	500gm	1
33	Potassium dichromate	500gm	1
34	Ammoni asolution	2.5Ltr	1
35	Sodium nitrate	500gm	1
37	Potassium nitrate	500gm	1
38	Stroncium nitrate	500gm	1
39	Sodalime	500gm	1
40	Zinc sulphate	500gm	1
41	Cobalt(II)nitrate	500gm	1
42	Nessler'sreagents	125ml	1
43	Ferric chloride	500gm	1
44	Dimethyl glyoxime	500ml	1
45	Benzaldehyde	500ml	1

46	Potassium ferrocyanide	500gm	1
47	Tollen's reagents	100ml	1
48	Oxalic acid	500gm	1
49	Sodium hydroxide	500gm	1
50	Potassium hydroxide	500gm	1
51	Benzaldehyde	500ml	1
52	2,4-DNPH	100gm	1
53	Copper carbonate	500gm	1
54	Sodium sulphate	500gm	1
55	Benzoic acid	500gm	1
56	cuprous chloride	100gm	1
57	Phosphoric acid	500ml	1
58	acetic anhydride	100gm	1
59	Zinc dust	500gm	1
60	acetanilide	500gm	1
61	sod. Acetate	500gm	1
62	Copper sulphate	500gm	1
63	Magnesium chloride	500gm	1
64	cupric chloride	500gm	1
65	lead nitrate	500gm	1
66	iodine	100gm	1
67	starch	500gm	1
68	EDTA	500gm	1
69	Salicylic acid	500gm	1
70	Ammonium carbonate	500gm	1
71	Lead acetate	500gm	1
72	Magneson reagent	250ml	1
73	Ammonium thiocyanate	250gm	1
74	pot. Ferrocyanide	500gm	1
75	sodalime	500gm	1
76	Ammonium acetate	500gm	1
77	pot. Nitrate	500gm	1
78	sod. Nitrite	500gm	1
79	Benzoyl chloride	500ml	1
80	Pot. iodide	100gm	1
81	Pot. bromide	500gm	1
82	Aluminium sulphate	500gm	2
83	Aluminium chloride	500gm	1
84	Di sodium hydrogen phosphate	250 gm	1

## Annexure-II

SL. NO	Name of instruments	UNIT
1	Digital pH Meter with electrode and temperature	1
2	Digital Conductivity meter	1
3	High Precision Digital Melting Point apparatus	1
4	Photo Colorimeter	1
5	Stainless Steel Copper Calorimeter Double Wall	1
6	Digital potentiometer	1
7	Ostwald viscometer	1
8	Cooling apparatus (refrigerator)	1
9	Computer for lab instruments and stocks	1
10	Steel almirah	2
11	Micro wave oven	1
12	Uv light box	1
<b>Laboratory equipments</b>		<b>dozen</b>
1	Conical flask 250ml borosil	2
2	Conical flask 500ml borosil	2
3	Measuring flask 100ml borosil	1
4	Measuring flask 100ml borosil	1
5	Pipette 5ml	1
6	Pipette 10ml	1
7	Pipette 25ml	1
8	Burette 50ml	1
9	Blow pipe	1
10	Glass funnel	1
11	Test tube	2
12	Test tube holder	1
13	wire gauge	3
14	Tripod stand	1
15	Retort iron stand with clamp	1
16	Filter paper	2
17	TLC paper	20

**ZOOLOGY LAB. EQUIPMENT**

<b>Sl.no</b>	<b>EQUIPMENTS</b>	<b>Quantity</b>
1	Polymerase chain reaction kit(PCR kit)	1
2	Glass electrode and reference electrode(for PH meter)	1 no. each
3	Radio immuno assay kit	1
4	Laminar airflow cabinet	1
5	TDS meter	1
6	Centrifuge machine(Remi brand)	1
7	Battery(AA)rechargeable with charger(Sony brand)	1
8	Desktop computer set(LG brand)	1
9	Inkjet printer(hp brand)	1
10	Steel almirah(Godrej brand)	1
11	Blood grouping kit(MDH brand)	1
	<b>CHEMICALS</b>	
1	DPX BDH brand	250ml
2	Iodine solution BDH brand	125ml
3	Haematoxylene BDH brand	125ml
4	Ammonium chloride BDH brand	200ml
5	Barium sulphate BDH brand	250ml
6	BOD bottle and COD bottle	1no. each
7	Diphenyle amine BDH brand	100gm
8	DNA extracts BDH brand	100gm
9	RNA extracts BDH brand	100gm

10	Orcinol	BDH brand	100ml
11	Ether	BDH brand	250ml
12	Formyldehyde preservative	BDH brand	5 litres
13	Pottasium dichromate	BDH brand	250gm
14	Glycerine	BDH brand	250ml
15	TCA	BDH brand	250ml
16	Periodic acid schiffs reagent	BDH brand	250ml
17	Activated charcoal	BDH brand	250gm
18	Absolute alcohol	BDH brand	500ml
19	Perchloric acid	BDH brand	100ml

Sl.no	Items/,chemicals continued...	Quantity	
20	Acetocarmine	BDH brand	100mg
21	Toluene	BDH brand	100ml
22	Mercury chloride	BDH brand	100ml
	<b>GLASSWARES</b>	<b>Quantity</b>	
1	Test tubes	1gross	
2	Dropper,10ml,5ml,1ml	1each	
3	BOD bottle	1 no.	
4	Burette stand	10 nos.	
5	Petridish(small,medium,large sized)	5 nos each	
6	Pricking needle apparatus	50 nos.	
7	Permanent slides(mitosis and meiosis)	1 set each	
8	Permanent slides of T.S of thyroid,adrenal,kidney, liver,testis,ovary of mammals	1 no. each	
9	T.S of pharyngeal,gizzard,typhlosolar region of	1each	

	earthworm	
10	T.S of brachiogenital region of Balanoglossus	1
11	T.S of oral hood region of Amphioxus	1
<b>CHARTS</b>		
1	Stages of mitosis	1no.
2	Stages of meiosis	1no.
3	Comparative study of limb bones and girdle bones of	
	Vertebrates	1no. each
4	Pedigree chart	1 no
5	Human karyotypes	1 no.
12	Human embryonic development	1no.
13	Human menstrual cycle	1no.
14	Evolution of man	1no.
15	Polytene chromosome	1no.
<b>EMBRYOLOGICAL SLIDES</b>		
1	24 hrs.,33hrs,36hrs,43hrs,	1no. each
2	Blastula,Gastrula stage of frog	1no.each
3	Amoeba,Euglena,Paramecium(W.M)	1 no.each
4	T.S of Sycon	1no.
5	Paramecium conjugation(W.M)	1no.
6	Paramecium binary fission	1no.
7	Nerve cells (W.M)	1no.
8	Striated muscle fibres	1no.

**DEPARTMENT OF PHYSICS GANJAM COLLEGE, GANJAM SESSION**  
**2024-25**

**LABOURATORY REQUIREMENTS**

**EQUIPMENTS AND OTHER REQUIREMENT :**

SL No	NAME	PRICE	QUANTITY	TOTAL AMOOUT
1.	HP COMPUTER SYSTEM		1	
2.	HP PRINTER CUM XEROX CUM SCANNER		1	
3.	TRAVELLING MICROSCOPE		3	
4.	SPECTROMETER		3	
5.	DETERMINATION OF COEFFICIENT VISCOCITY BY CAPPILARYY FLOW METHOD		2	
6.	DETERMINATION OF UNKNOWN LOW RESISTANCE USING POTTENTIOMETER		2	
7.	MEASUREMENT OF FIELD STRENGTH (B) IN A SOLENOID		1	
8.	SELF INDUCTION OF A COIL BY ANDORSOMS BRIDGE		2	
9.	VERIFICATION OF THEVNINS AND NORTON THEORM		2	
10.	PLAIN DEFFRACTION GARTTING (6000 LINE /CM)		2	
11.	MERCURY LAMP		1	
12.	NEWTONS RING (DIGITAL SET ) COMPLETE SET WITH MICROSCOPE		1	
13.	LEE-DISC APPARTUS		1	
14.	DETERMINATION OF THERMO EMF OF A THERMO COUPLE (ICE)		2	
15.	SINGLE STROVE FOR HEAT EXP.		1	
16.	ZENOR DIOD CHARACTERSTICS APARTUS		2	
17.	BJT IN CE IN CONFIGURATION		2	
18.	RC COUPLE AMPLIFIER) FREQUENCY RESPONSE		2	
19.	VI SOLAR CELL POWER CORVE		1	
20.	CHARACTERSTICS OF PN JUNCTION DIODE KIT		2	
21.	TUNNEL DIODE KIT		2	
22.	SINGLE SLIT AND DOUBLE SLIT		1	
23.	VERIFICATION OF LAW OF MALLOUS		1	
24.	TELESCOPE		3	
25.	MEASUREMENT OF DI ELECTRIC		1	

	CONSTANT OF A DI ELECTRIC MATERIAL, VERIATION WITH FREQUENCY			
26.	B/H CURVE OF IRIN SOLENOID		1	
27.	POLLARIMETER		1	
28.	ANALYSIS OF ELECTRICAL POLLARISED LIGHT BY BABINET COMPENSETOR		1	
29.	TO VERIFY STEPPIN LAW OF RADIATION AND DETERMINE STEPPINE CONSTANT		2	
30.	DETERMINETION OF BOLTZMAN CONSTANT VI CHARACTERSTIC OF PN JUNCTION		1	
31.	YOUNGS MODLUS		1	
32.	SONO METER		1	
33.	FRESENAL BIPRISM		1	
34.	ECE OF COPPER		1	
35.	OHMS LAW		4	
36.	OPTICAL BENCH		2	
37.	METER BRIDGE EXP.(SERIES AND PARALLEL) WITH POWER SUPPLY KIT		4	
38.	GLASS PRISSOM		1 dz	
39.	SONOMETER TUNNING FORK		1	
40.	BOARD PIN AND NIDDLE (PRISM EXP.) EACH ITEM		3dz	
41.	RESISTANCE BOX		2	
42.	CONVEX MIRROR		6	
43.	CONCAVE MIRROR		6	
44.	PN JUNCTION DIODE CHARACTERSTICS		2	
45.	CHARACTERSTICS OF (NPN/PNP) TRANSISTER KIT		2	
46.	CONVERTION OF GALVANOMETER TO VOLTMETER KIT		1	
47.	COMPRASSION EMF OF TO GIVEN PRIMARY CELL USING POTENTIOMETER		1	
48.	TO OBSERVE THE LOADING EFFECT OF A DIGITAL MULTIMETER		2	
49.	EXTENSION BOARD (5 PLUG & SWITCH)		5	
50.	CONNECTING WIRE (METER BRIDGE)		10 mtr	
51.	CARRY FOSTER BRIDGE		1	
52.	DE-SAUTYS BRIDGE		1	
53.	POLLARIMETER		1	
54.	AMITER (A MA)		2	
55.	VOLTMETER		2	
56.	GALVANOMETER		2	
57.	TRIPOD STAND FOR KATTER PENDULUM		1	



58.	COPPER WIRE FOR MAXWELL NIDDLE, RIGIDITY STATISTIC METHOD		10 mtr	
59.	STUDY OF VI AND POWER CURVE OF SOLAR CELL		1	
60.	DETERMINATION OF BOLTZMEN CONSTANT		1	
61.	E/M BY THUMSONS METHOD USING BAR MAGNET		1	
62.	IRON RACK		2	
63.	SITTING CHAIR		6	
64.	GODREJ ALMIRAH		3	
65.	REFRIGIRATOR 198 LTR		1	

  
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