

**Proceedings of the Commissioner of Collegiate Education &
State Project Director, RUSA
Present : Sri Navin Mittal, IAS**

Sub: RUSA – Lab Equipment – Purchase of Equipment by the Principals of Government Degree Colleges – Orders – Issued.

Ref: 1. Review meetings held with the Principals of Government Degree Colleges on 20.11.2019, 21.11.2019 & 25.11.2019.
2. Memo No.03/RUSA/EQUIPMENT/2018 dated 07-08-2018

In the meetings held with the Principals of Government Degree Colleges, it was observed that most of the Colleges required Science Lab Equipment for Practicals in the CBCS Curriculum. In this regard the CCE & SPD, RUSA immediately ordered for the Subject Experts Committee which was constituted vide reference 2nd cited, to convene and finalize the required quantity of Lab Equipment per subject for a batch of 25 to 30 students. Accordingly, the Subject Experts for Chemistry, Botany, Zoology & Microbiology have submitted their requirements as of now.

The lists were circulated by the Project Officer, RUSA to HACA, SETWIN and NSIC, Hyderabad with a request to furnish the rates per item. While HACA and SETWIN have furnished the rates, NSIC has withdrawn from participating. Consequently the rates per item and the quantities per batch for the subjects mentioned above, are prepared and furnished for reference. Hence, the Principals are informed to procure Lab Equipment for Chemistry, Botany, Zoology, and Microbiology from HACA, Hyderabad as the prices quoted by HACA in comparison to SETWIN are Low. Based on the details appended to this Proceeding, orders should be placed while obtaining prior permission from the CCE & SPD, RUSA for administrative sanction of expenditure, invariably.

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**Commissioner of Collegiate Education &
State Project Director, RUSA**

To
The Principals
Government Degree Colleges

Proceedings of the Commissioner of Collegiate Education
& State Project Director (RUSA)

Present: Sri Navin Mittal, IAS

Rc. No. 03/RUSA/Equipment-Furniture/2018

dt: 20.10.2018

Sub: RUSA – Procurement of furniture under RUSA, in Government Degree Colleges in the State – Specifications – Communicated.

Read: 1) Meeting held in RUSA Resource Centre on 04.08.2018 with the Principals of certain Government Degree Colleges under RUSA.

2) Memo No. 03/RUSA/Equipment/2018, dt: 07.08.2018

3) U. O. Note No. CCE/furniture and equipment/2018 dt: 24.9.2018 from the Academic Cell, O/o the CCE, TS, Hyderabad, enclosed with Lr. & email dt: 17.8.2018, from the Committee of Principals.

* * *

In the meeting held with the Principals of Government Degree Colleges under RUSA, on 4.8.2018, it was decided to draw specifications and issue common guidelines for procurement of furniture and equipment with funds released under RUSA, as to maintain uniformity all over the State.

Further, in view of the report from the Committee of (03) Principals for item-wise specification for Procurement of furniture received through the reference 3rd read above, the Principals of all the Government Degree Colleges covered under RUSA are hereby issued the item-wise specifications as detailed below:

1) The furniture to be purchased by the Government Degree Colleges with RUSA funds may be procured from NSIC, Hyderabad.

2) The quotation issued by the NSIC, Hyderabad, for procurement of furniture, item-wise is mentioned below:

S. No.	Name of the item	Price (Rs.)	GST	GST Value (Rs.)	Net Price (per item) (Rs.)
1	Dual Desks	4,800/-	18%	864/-	5,664/-
2	S type chairs	1,990/-	18%	358/-	2,348/-
3	Computer Chairs	2,900/-	18%	522/-	3,422/-
4	Computer Tables	3,600/-	18%	648/-	4,248/-
5	Office Tables	4,200/-	18%	756/-	4,956/-
6	Steel Almirahs	10,300/-	18%	1854/-	12,154/-
7	Small Table	3,200/-	18%	576/-	3,776/-
8	Lab Tables	7,800/-	18%	1404/-	9,204/-
9	Lab Stools	1,200/-	18%	216/-	1,416/-
10	Storage facilities for books	12,500/-	18%	2250/-	14,750/-
11	Long size tables	7,800/-	18%	1404/-	9,204/-
12	Journal racks	3,850/-	18%	693/-	4,543/-

[P.T.O.]

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The item-wise details of specifications of the above furniture are appended in an Annexure to these proceedings.

- 2) The release of budget towards payments for purchase of above furniture shall be subject to submission of acknowledgement to this Office.
- 3) The other norms and guidelines under RUSA shall remain the same and shall be strictly followed under proper maintenance of record.

Sd/-

Commissioner of Collegiate Education &
State Project Director (RUSA)

To

The Principals of Government Degree Colleges under RUSA.

Spare - 1.

//True copy attested//



Project Officer
State Project Directorate
R.U.S.A.

NSIC/HYD/INT.MKTG/2018-19

Dt. 27.03.2019

To
Commissioner of Collegiate Education &
State Project Director (RUSA),
Hyderabad.

Dear Sir,

Sub: Request for accepting the changed price of Furniture Items.

With reference to the above subject, it is to inform that we have received orders from various Govt. Degree Colleges under RUSA towards the supply of furniture items based on our quotation sent through email on 17.08.2018.

Subsequently, we received a revised offer from our associate unit based on price of raw material and hence our revised offer is as follows:

S. No.	Furniture Name	Previously Quoted Price (Inclusive of Tax & Transportation)	Revised New Price (inclusive of Tax & Transportation)
1	Computer Table	4248	3700
2	Journal Racks	4543	4130
3	Computer Chair	3422	4500

Prices of remaining furniture items as mentioned in our quotation dt. 17/08/2018 remains unchanged.

Kindly consider the above prices for future requirements.

Thanking you,

Yours faithfully,


(K SRINIVAS)
Senior Branch Manager

DEPARTMENT OF BOTANY

Equipment and Glassware required for B.Sc - Practicals

(For one batch of 25-30 students)

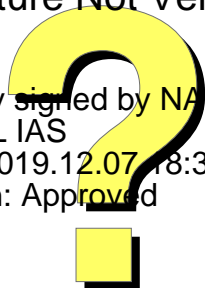
S.No	Name of the article	Required Quantity
1	Analytical balance	2
2A	Analytical balance Weigh box 1mg to 100g capacity	15
2B	Analytical balance Weigh box 1mg to 200g capacity	15
3	Beaker -capacity 100 ML	30
4	Beaker -capacity 250 ML	30
5	Beaker -capacity 500 ML	5
6	Beaker -capacity 1000 ML	2
7	BOD Bottles	5
8	Bottle Opener /7 Tin Cutter	5
9	Bucket Plastic	5
10	Burette Clamp - Fischer type Heavy - Powder coated	30
11	Burette Stand Heavy Size 8 "X 5" metallic	30
12A	Burettes 50 ml	30
12B	Burettes 50 ml	20
13	Colrimeter Digital (8 Filters, Microcontrolled)	1
14	Centrifuge Machine electrical capacity 4X15 ml	1
	Centrifuge Machine electrical capacity 4X15 ml	1
15	Centrifuge Machine Hand Driven capacity 4X15 ml	1
16	Centrifuge Tubes capacity - 10ml/15ml	8
17	Chart keeping Almaras	1
18	Chromatography Chambers	30
19	Compound Microscope (Monocular)	12
20	Conical Flask - Capacity 100 ML	30
21	Conical Flask - Capacity 250 ML	30
22	Copper Water bath with concentric ring 15 Cm, 6 "	20
23	Cover clips	S (each box 30 P)
24	Desiccators 250mm	1
25	Dissecting Microscope	6
26	Droppers with conical Teat.. Size 6"	30
27	Droppers with conical Teat.. Size 8"	30
28	Electrical balance digital 10 mg (Max cap Wt.300 g)	5
29	Filter paper (set of 500 sheets)	2 groce
30	First aid box (surgical box)	2
31	Forceps 3'	30
32	Funnel - Size 2"	30
33	Funnel - Size 3"	30
34	Glass rods	30
35	Glass rods Pointed	30
36	Glass - Almaras	6
37	Glazed tiles 6' x 6'	30
38	Herbarium racks	2
39	Herbarium Press	2
40	Hot air oven 355 x 355 x 355 MM S.S.	2
41	Illuminators	12
42	Measuring Cylinders - 5 ml	15

43	Measuring Cylinders - 10 ml	30
44	Measuring Cylinders - 50 ml	15
45	Measuring Cylinders - 100 ml	15
46	Measuring Cylinders - 1000 ml	5
47	Mortar & Pestle - 4" Porcelain	30
48	Needles	30
49	Petri dishes 2" and 5"	30
50	Pipette Volumetric 10 ml	30
51	Pipette Volumetric 20 ml	30
52	Pipette graduated 5 ml	5
53	pH meter	6
54	Plain slides	(Each box 50)
55	Polythene cans 5 L	2 Each
	Polythene cans 10 L	2
	Polythene cans 20 L	2
56	Reagent bottle 250 mL	50
57	Reagent bottle with Wide mouth	25
58	Refrigerator 190 L	1
59	Slide Wooden Box	2
60	Spatula Size 6" Stainless Steel	10
61	Spirit Lamp	6
62	Staining Racks	6
63	Steel Almaras	4
64	Stop clock	2
65	Test tube brushes	30
66	Test Tube Holder - Chromium plated with Wooden Handle - Iron	30
67	Test Tube stand 10 Rack	12
68	Test tube (boiling)	12
69	Test tube (normal) 15 ml	100
70	Thistle Funnel	30
71	Thistle Funnel Stand	30
72	Watch Glasses	30
73	Whatman Filter paper	6 Sheets
74	Wooden Tables	12
75	Wooden Stools	32
76	Bio Visual Charts	140
77	Specimens	35
78	Permanent Slides	80
79	Models (POP)	12

Commissioner of Collegiate Education &
State Project Director, RUSA

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DEPARTMENT OF BOTANY

Equipment and Glassware required for B.Sc - Practicals

(For one batch of 25-30 students)

S.No	Name of the article	Make	HACA (unit price in Rs.)
1	Analytical balance	Keroy/Pression	4802
2A	Analytical balance Weigh box 1mg to 100g capacity	Acculab	1196
2B	Analytical balance Weigh box 1mg to 200g capacity	Acculab	1470
3	Beaker -capacity 100 ML	Borosil/Bsgw Avon- Glass - (R)	150
4	Beaker -capacity 250 ML	Borosil/Bsgw Avon- Glass - (R)	255
5	Beaker -capacity 500 ML	Borosil/Bsgw Avon- Glass - (R)	370
6	Beaker -capacity 1000 ML	Borosil/Bsgw Avon- Glass - (R)	420
7	BOD Bottles	Borosil/Bsgw Avon- Glass - (R)	650
8	Bottle Opener /7 Tin Cutter	Borosil/Bsgw Avon- Glass - (R)	150
9	Bucket Plastic	Polylab	167
10	Burette Clamp - Fischer type Heavy - Powder coated	Ialco - ®	137
11	Burette Stand Heavy Size 8 "X 5" metallic	Ialco - ®	294
12A	Burettes 50 ml	Polylab	390
12B	Burettes 50 ml	Borosil/Bsgw Avon- (R)	500
13	Colrimeter Digital (8 Filters, Microcontrolled)	INFRA IR 506 C	10290
14	Centrifuge Machine electrical capacity 4X15 ml	REMI	7448
	Centrifuge Machine electrical capacity 4X15 ml	LALCO	4704
15	Centrifuge Machine Hand Driven capacity 4X15 ml	LALCO	980
16	Centrifuge Tubes capacity - 10ML/15ml	Borosil/Bsgw Avon- (R)	70
17	Chart keeping Almaras	BIO- GRAFT	14210
18	Chromatography Chambers	INDIAN GLASS	137
19	Compound Microscope (Monocular)		3920
20	Conical Flask - Capacity 100 ML	Borosil/Bsgw Avon- (R)	80
21	Conical Flask - Capacity 250 ML	Borosil/Bsgw Avon- (R)	120
22	Copper Water bath with concentric ring 15 Cm, 6 "	Acculab	388
23	Cover clips	BLUE STAR	27
24	Desiccators 250mm	Avon ®	7840
25	Dissecting Microscope	LAFOC ISI	1225
26	Droppers with conical Teat.. Size 6"	Avon ®	17
27	Droppers with conical Teat.. Size 8"	INDIAN GLASSWARE	19
28	Electrical balance digital 10 mg (Max cap Wt.300 g)	WENSAR/INFRA	11760
29	Filter paper (set of 500 sheets)	FILCORP	1372
30	First aid box (surgical box)	Polylab	312
31	Forceps 3'	S.S	34
32	Funnel - Size 2"	Borosil/Bsgw Avon- (R)	44
33	Funnel - Size 3"	Borosil/Bsgw Avon- (R)	68
34	Glass rods	Borosil/Bsgw Avon- (R)	18
35	Glass rods Pointed	BOROSIL / BsgwAvon ®	23
36	Glass - Almaras		—
37	Glazed tiles 6' x 6'	PORCELEIN TILE	38
38	Herbarium racks	BIO - GRAFT	25480
39	Herbarium Press		2450
40	Hot air oven 355 x 355 x 355 MM S.S.	LALCO / biotech	18620
41	Illuminators		980
42	Measuring Cylinders - 5 ml	BOROSIL / BsgwAvon ®	115
43	Measuring Cylinders - 10 ml	BOROSIL / BsgwAvon ®	135

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44	Measuring Cylinders - 50 ml	BOROSIL / BsgwAvon ®	160
S.No	Name of the article	Make	HACA (unit price in Rs.)
45	Measuring Cylinders - 100 ml	BOROSIL / BsgwAvon ®	195
46	Measuring Cylinders - 1000 ml	BOROSIL / BsgwAvon ®	990
47	Mortar & Pestle - 4" Porcelain	J-BRAND	196
48	Needles		22
49	Petri dishes 2" and 5"	BOROSIL / BsgwAvon ®	100
50	Pipette Volumetric 10 ml	BOROSIL / BsgwAvon ®	70
51	Pipette Volumetric 20 ml	BOROSIL / BsgwAvon ®	85
52	Pipette graduated 5 ml	BOROSIL / BsgwAvon ®	380
53	pH meter	INFRA IR - 501	13622
54	Plain slides	BLUE STAR	54
55	Polythene cans 5 L	POLYLAB	69
	Polythene cans 10 L	POLYLAB	118
	Polythene cans 20 L	POLYLAB	147
56	Reagent bottle 250 mL	BsgwAvon ®	319
57	Reagent bottle with Wide mouth	BsgwAvon ®	343
58	Refrigerator 190 L	WHIRLPOOL	10378
59	Slide Wooden Box	Acculab ®	—
60	Spatula Size 6" Stainless Steel	Acculab ®	23
61	Spirit Lamp	Acculab ®	59
62	Staining Racks	Acculab ®	147
63	Steel Almaras		—
64	Stop clock	Acculab ®	809
65	Test tube brushes	MLS	23
66	Test Tube Holder - Chromium plated with Wooden Handle - Iron	Acculab ®	25
67	Test Tube stand 10 Rack	POLYLAB	245
68	Test tube (boiling)	BOROSIL / BsgwAvon ®	40
69	Test tube (normal) 15 ml	BOROSIL / BsgwAvon ®	22
70	Thistle Funnel	INDIAN GLASS	147
71	Thistle Funnel Stand		69
72	Watch Glasses	INDIAN GLASS	42752
73	Whatman Filter paper	Whatman Company	18
74	Wooden Tables		—
75	Wooden Stools		—
76	Bio Visual Charts	BIOVISUAL	608
77	Specimens	MICROVISUAL	108
78	Permanent Slides	MICROVISUAL	34
79	Models (POP)	MICROVISUAL	833

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Commissioner of Collegiate Education &
State Project Director, RUSA

DEPARTMENT OF CHEMISTRY

Equipment and Glassware required for B.Sc - Practicals

(For one batch of 25-30 students)

S.No	Name of the Equipment (With Specifications)	Required Quantity
1	Analytical balance	2
	Analytical balance	2
2	Analytical balance Weigh box (0.1 mg- 100 mg)	2
	Analytical balance Weigh box (0.1 mg- 100 mg)	2
3	Atomic model set inorganic molecules - Euro model	1
4	Atomic Model set organic molecules - Euro Model	1
5	Balance Digital - 0.1mg -300 mg front loading , LCD Display stainless steel pan	2
	Balance Digital - 0.1mg -300 mg front loading , LCD Display stainless steel pan	2
6	Beaker -capacity 100 ML	50
	Beaker -capacity 100 ML	50
7	Beaker -capacity 250 ML	50
	Beaker -capacity 250 ML	50
8	Beaker -capacity 500 ML	25
	Beaker -capacity 500 ML	25
9	Beaker -capacity 1000 ML	5
	Beaker -capacity 1000 ML	5
10	BOD Bottles 300 ML	25
	BOD Bottles 300 ML	25
11	BOD incubator (Orbital Shaling Cum BOD Incubator) 16 Flask/ BTI -2518X18X18,400 watts)	1
	BOD incubator (Orbital Shaling Cum BOD Incubator) 16 Flask/ BTI -2518X18X18,400 watts)	1
12	Boiling Tubes 20 ml 25x150mm	50
13	Bottle Opener	5
14	Bucket Plastic	5
15	Buckner Flask	10
16	Buckner Funnel Porecelain 75 mm, 3" thick steam	10
17	Bunsen burners -Heavy base with stop cock	25
18	Burette clamp - Fischer type- Heavy - powder coated	30
19	Burette Stand heavy Size - 8"x5" Zine plated - rod size 24" long	30
20	Burettes 50ML	50
	Burettes 50ML	50
21	Capillary tubes set of 100	2
22	Centrifuge Machine electrical capacity 4x15 ml	2
	Centrifuge Machine electrical capacity 4x15 ml	2
23	Centrifuge Machine hand driven capacity 4x15 ml	2
	Centrifuge Machine hand driven capacity 4x15 ml	2
24	Centrifuge Tubes capacity - 10ml/15 ml	50
	Centrifuge Tubes capacity - 10ml/15 ml	50
25	China dish porcelain 100ML/250 ML	15
	China dish porcelain 100ML/250 ML	15
26	Chromatography column with ground joint medium	5
27	COD Reflux Assembly (RBF with reflex Condenser) set	5

S.No	Name of the Equipment (With Specifications)	Required Quantity
28	Colorimeter Digital - Micro Controller 8 Fliter. Wavelength range : 400 -640mm	5
	Colorimeter Digital - Micro Controller 8 Fliter. Wavelength range : 400 -640mm	5
29	Condensor set - (Size - 24/29)	5
30	Conductivity meter digital	5
	Conductivity meter digital	5
31	Conical Flask - Capacity 100 ML	15
	Conical Flask - Capacity 100 ML	15
32	Conical Flask - Capacity 250 ML	50
	Conical Flask - Capacity 250 ML	50
33	Copper Turnings - 100G (KG)	1
	Copper Turnings - 100G (KG)	1
34	Cruscibles - 50 ML/ 150 ML	25
	Cruscibles - 50 ML/ 150 ML	25
35	Density bottle - 10 ML	25
	Density bottle - 10 ML	25
36	Distilled Water plant 61 Capacity , 4.5KW, Staineless steel chamber	1
	Distilled Water plant 61 Capacity , 4.5KW, Staineless steel chamber	1
37	Droppers with conical Teat, Size 6"	50
	Droppers with conical Teat, Size 6"	50
38	Droppers with conical Teat, Size 8"	50
	Droppers with conical Teat, Size 8"	50
39	Filter Paper 500 Sheets	2
40	First aid box (Surgical) big size	2
41	Forceps stainelees steel	25
	Forceps stainelees steel	25
42	Funnel- Size 2"	30
43	Funnel- Size 3"	30
44	Fusion Tubes	100
45	Glass rods	100
46	Glass rods pointed	100
47	Glazed tiles 6"*6"	50
48	Hot air oven (Size 18"x18"x18" - 95 L capacity)	2
	Hot air oven (Size 18"x18"x18" - 95 L capacity)	2
49	Iodination Flask capacity 250 ML	30
50	Kipps Apparatus 300 ML	2
	Kipps Apparatus 300 ML	2
51	LPG gas with Tata Pipeline Connection material and installation for 10 burners brass	1
52	Measuring Cylinders - 5 MI	15
53	Measuring Cylinders - 10 MI	15
54	Measuring Cylinders - 50 MI	15
55	Measuring Cylinders - 100 MI	15
56	Measuring Cylinders - 1000MI	2
57	Melting Point Appartus - 2mLH	1
	Melting Point Appartus - 2mLH	1
58	Microwave oven 220 L	1
	Microwave oven 220 L	1

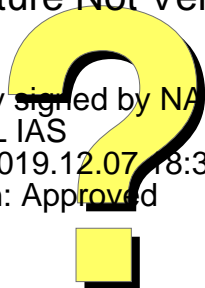
S.No	Name of the Equipment (With Specifications)	Required Quantity
59	Mortar & Pestle - 4 " Porcelain	30
60	Pipette Volumetric 10 MI	50
61	Pipette Volumetric 20 MI	25
62	Pipette graduated 5 MI	5
63	Pipette Pump	25
64	PH meter - PH range 1 - 14, resolution 0.01 : temparature range 0-100° C	5
	PH meter - PH range 1 - 14, resolution 0.01 : temparature range 0-100° C	5
	PH meter - PH range 1 - 14, resolution 0.01 : temparature range 0-100° C	5
65	Polythene cans 5 L	10
	Polythene cans 10L	5
	Polythene cans 20 L	5
66	Potentio Meter Digital	5
	Potentio Meter Digital	5
67	Reagent bottile - 100 ML	100
68	Reagent bottile - 250ML	200
69	Reagent bottile with wide mouth	50
70	Refrigerator domestic type 200 L	2
	Refrigerator domestic type 200 L	2
71	Rough balance 5 Kg	2
	Rough balance 5 Kg	2
72	Round bottomed flask 250 ml	25
73	Rubber cork ONE HOLED assoted sizes	25
74	Separating Funnel 250 ML	10
75	Solution container 2 L	10
	Solution container 2.5 L	10
	Solution container 5 L	5
76	Spatula Size 6 " stainless steel - Superior Quality	50
77	Stalagmometer	10
	Stalagmometer	10
78	Standerd Flask 100 ML	30
	Standerd Flask 100 ML	30
79	Standerd Flask 250 ML	30
	standerd Flask 250 ML	30
80	Standerd Flask 500 ML	10
	Standerd Flask 500 ML	10
81	Stop Clock	10
	Stop Clock	10
82	Suction Flask 500 ML	5
	Suction Flask 500 ML	5
83	Suction Pump Low pressure	1
	Suction Pump Low pressure	1
84	Test Tube brushes	50
85	Test Tube Holder - Chromium plated with wooden handle- Iron	50
86	Test Tube stand -10 Racks	50
87	Test Tube (Boiling)18X 150	200
	Test Tube (Boiling)18X 151	200
88	Test Tube (Boiling)15X 125	400
	Test Tube (Boiling)15X 126	400

89	TLC Sheets (Silicage Coated Alluminium Sheets) set of 25	2
S.No	Name of the Equipment (With Specifications)	Required Quantity
90	TLC Chambers	10
91	TLC Iodination Chamber	2
92	TLC UV Chamber	1
93	Tripod Stand	30
	Tripod Stand	30
94	Vaccum decicator - 100 mm Ground Flange	2
95	Vaccum Pump low pressure	1
96	Viscometer	10
97	Wash bottle 250 ML	40
98	Watch Glass Small/ Medium	60
	Watch Glass Small/ Medium	60
99	Water bath heavy duty made of copper Size - 6" - Superior	2
	Water bath heavy duty made of copper Size - 6" - Superior	2
100	Water Circulation pump 0.025 HP Capacity & rubbers tybes set	1
101	Whatman Fliter paper grade 1 Circular	500
102	Wire guage - 6"x6" - with frame double asbestos	50
103	Racks for Reagents wood/steel	4
104	Iron almirah with glass	4
105	Iron almirah	4
106	Lab tables wooden with asbestos sheets	12
107	Stools	25

Commissioner of Collegiate Education &
State Project Director, RUSA

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Date: 2019.12.07 18:34:32 IST
Reason: Approved



DEPARTMENT OF CHEMISTRY

Equipment and Glassware required for B.Sc - Practicals

(For one batch of 25-30 students)

S.No	Name of the Equipment (With Specifications)	Make	HACA (unit price in Rs.)
1	Analytical balance	Keroy	3920
	Analytical balance	Precision	3136
2	Analytical balance Weigh box (0.1 mg- 100 mg)	Acculab	1421
	Analytical balance Weigh box (0.1 mg- 100 mg)	LAFCO	1225
3	Atomic model set inorganic molecules - Euro model	First - Q	1911
4	Atomic Model set organic molecules - Euro Model	POLYLAB	3136
5	Balance Digital - 0.1mg -300 mg front loading , LCD Display stainless steel pan	Wensar	9604
	Balance Digital - 0.1mg -300 mg front loading , LCD Display stainless steel pan	Keyroy	11760
6	Beaker -capacity 100 ML	Borosil	72
	Beaker -capacity 100 ML	Bsgw Avon Glass (R)	51
7	Beaker -capacity 250 ML	Borosil	75
	Beaker -capacity 250 ML	Bsgw Avon Glass (R)	57
8	Beaker -capacity 500 ML	Borosil	120
	Beaker -capacity 500 ML	Bsgw Avon Glass (R)	88
9	Beaker -capacity 1000 ML	Borosil	250
	Beaker -capacity 1000 ML	Bsgw Avon Glass (R)	186
10	BOD Bottles 300 ML	Borosil	560
	BOD Bottles 300 ML	Bsgw Avon Glass (R)	451
11	BOD incubator (Orbital Shaling Cum BOD Incubator) 16 Flask/ BTI -2518X18X18,400 watts)	Biotechnics	128331
	BOD incubator (Orbital Shaling Cum BOD Incubator) 16 Flask/ BTI -2518X18X18,400 watts)	LAFCO	24500
12	Boiling Tubes 20 ml 25x150mm	Borosil / Bsgw Avon-Glass - (R)	25
13	Bottle Opener	Hoverlabs	54
14	Bucket Plastic	polylab	147
15	Buckner Flask	Borosil/Bsgw Avon- Glass - (R)	180
16	Buckner Funnel Porecelain 75 mm, 3" thick steam	J- Brand	167
17	Bunsen burners -Heavy base with stop cock	Lalco	172
18	Burette clamp - Fischer type- Heavy - powder coated	Hoverlabs/Lalco	176
19	Burette Stand heavy Size - 8"x5" Zine plated - rod size 24" long	Hoverlabs/Lalco	221
20	Burettes 50ML	Polylab	294
	Burettes 50ML	Borosil	620
21	Capillary tubes set of 100	BOXES	245
22	Centrifuge Machine electrical capacity 4x15 ml	Hoverlabs	980
	Centrifuge Machine electrical capacity 4x15 ml	REMI	7448
23	Centrifuge Machine hand driven capacity 4x15 ml	Hoverlabs	3920
	Centrifuge Machine hand driven capacity 4x15 ml	REMI	8722
24	Centrifuge Tubes capacity - 10ml/15 ml	Borosil	70
	Centrifuge Tubes capacity - 10ml/15 ml	Bsgw Avon- Glass - (R)	80
25	China dish porcelain 100ML/250 ML	J - Brand	118
	China dish porcelain 100ML/250 ML	J - Brand	176

File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No	Name of the Equipment (With Specifications)	Make	HACA (unit price in Rs.)
26	Chromatography column with ground joint medium	Borosil/Bsgw Avon- Glass - (R)	590
27	COD Reflux Assembly (RBF with reflex Condenser) set	Borosil/Bsgw Avon- Glass - (R)	1600
28	Colorimeter Digital - Micro Controller 8 Fliter. Wavelength range : 400 -640mm	INFRA (IR506 C)	8820
	Colorimeter Digital - Micro Controller 8 Fliter. Wavelength range : 400 -640mm	ELICO	13230
29	Condensor set - (Size - 24/29)	Borosil Glass	2660
30	Conductivity meter digital	INFRA (IR503 C)	11270
	Conductivity meter digital	ELICO (CM 180)	14700
31	Conical Flask - Capacity 100 ML	Borosil	80
	Conical Flask - Capacity 100 ML	Bsgw Avon- Glass - (R)	—
32	Conical Flask - Capacity 250 ML	Borosil	100
	Conical Flask - Capacity 250 ML	Bsgw Avon- Glass - (R)	—
33	Copper Turnings - 100G (KG)	Hoverlabs	172
	Copper Turnings - 100G (KG)	Jyothi	—
34	Crucibles - 50 ML/ 150 ML	Borosil	1250
	Crucibles - 50 ML/ 150 ML	Bsgw Avon- Glass - (R)	3626
35	Density bottle - 10 ML	Borosil	250
	Density bottle - 10 ML	Bsgw Avon- Glass - (R)	372
36	Distilled Water plant 61 Capacity , 4.5KW, Staineless steel chamber	LACO	13720
	Distilled Water plant 61 Capacity , 4.5KW, Staineless steel chamber	BIOTECH	17640
37	Droppers with conical Teat, Size 6"	Borosil	15
	Droppers with conical Teat, Size 6"	Bsgw Avon- Glass - (R)	—
38	Droppers with conical Teat, Size 8"	Borosil	20
	Droppers with conical Teat, Size 8"	Bsgw Avon- Glass - (R)	—
39	Filter Paper 500 Sheets	Kalpi	1470
40	First aid box (Surgical) big size		1470
41	Forceps stainelees steel	Shiv	—
	Forceps stainelees steel	Lalco	221
42	Funnel- Size 2"	Borosil/Bsgw Avon- Glass - (R)	75
43	Funnel- Size 3"	Borosil/Bsgw Avon- Glass - (R)	125
44	Fusion Tubes		529
45	Glass rods	Borosil/Bsgw Avon- Glass - (R)	18
46	Glass rods pointed	Bsgw Avob Glass (R)	25
47	Glazed tiles 6"*6"		294
48	Hot air oven (Size 18"x18"x18" - 95 L capacity)	Lalco (R)	19610
	Hot air oven (Size 18"x18"x18" - 95 L capacity)	Biotech (BT 129)	17640
49	Iodination Flask capacity 250 ML	Borosil/Bsgw Avon- Glass - (R)	300
50	Kipps Apparatus 300 ML	Polylab	833
	Kipps Apparatus 300 ML	bsgw Avon glass ®	2548

File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No	Name of the Equipment (With Specifications)	Make	HACA (unit price in Rs.)
51	LPG gas with Tata Pipeline Connection material and installation for 10 burners brass		17640
52	Measuring Cylinders - 5 MI	Borosil/Bsgw Avon- Glass - (R)	415
53	Measuring Cylinders - 10 MI	Borosil/Bsgw Avon- Glass - (R)	475
54	Measuring Cylinders - 50 MI	Borosil/Bsgw Avon- Glass - (R)	660
55	Measuring Cylinders - 100 MI	Borosil/Bsgw Avon- Glass - (R)	750
56	Measuring Cylinders - 1000MI	Borosil/Bsgw Avon- Glass - (R)	990
57	Melting Point Appartus - 2mLH	BIOTECHNIC INDIA (BTI 134)	5096
	Melting Point Appartus - 2mLH	LALCO	4851
58	Microwave oven 220 L	IFB 920SC220 L	7350
	Microwave oven 220 L		7330
59	Mortar & Pestle - 4 " Porcelain	J- BRAND	123
60	Pipette Volumetric 10 MI	Borosil/Bsgw Avon- Glass - (R)	520
61	Pipette Volumetric 20 MI	Borosil/Bsgw Avon- Glass - (R)	615
62	Pipette graduated 5 MI	Borosil/Bsgw Avon- Glass - (R)	490
63	Pipette Pump	POLYLAB	608
64	PH meter - PH range 1 - 14, resolution 0.01 : temparature range 0-100° C	Digisun	7350
	PH meter - PH range 1 - 14, resolution 0.01 : temparature range 0-100° C	INFRA (IR 501)	9800
	PH meter - PH range 1 - 14, resolution 0.01 : temparature range 0-100° C	ELICO(L1 -120)	13720
65	Polythene cans 5 L	Chetan	123
	Polythene cans 10L	Chetan	196
	Polythene cans 20 L	Chetan	245
66	Potentio Meter Digital	INFRA IR511 B	9936
	Potentio Meter Digital	ELICO ____120)	13720
67	Reagent bottile - 100 ML	Borosil/Bsgw Avon- Glass - (R)	300
68	Reagent bottile - 250ML	Borosil/Bsgw Avon- Glass - (R)	325
69	Reagent bottile with wide mouth	Borosil/Bsgw Avon- Glass - (R)	300
70	Refrigrator domestic type 200 L	LG	14700
	Refrigrator domestic type 200 L	Voltas	13720
71	Rough balance 5 Kg	Hoverlabs	980
	Rough balance 5 Kg	LALCO	1274
72	Round bottomed flask 250 ml	Borosil/Bsgw Avon- Glass - (R)	250
73	Rubber cork ONE HOLED assoted sizes	Hoverlabs	34
74	Separating Funnel 250 ML	Borosil/Bsgw Avon- Glass - (R)	1400

File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No	Name of the Equipment (With Specifications)	Make	HACA (unit price in Rs.)
75	Solution container 2 L	Glass SET	490
	Solution container 2.5 L	Glass SET	735
	Solution container 5 L	Glass SET	980
76	Spatula Size 6 " stainless steel - Superior Quality	Acculab	172
77	Stalagmometer	Borosil	90
	Stalagmometer	Bsgw Avon- Glass - (R)	78
78	Standerd Flask 100 ML	Borosil	265
	Standerd Flask 100 ML	Bsgw Avon- Glass - (R)	221
79	Standerd Flask 250 ML	Borosil	285
	standerd Flask 250 ML	Bsgw Avon- Glass - (R)	260
80	Standerd Flask 500 ML	Borosil	680
	Standerd Flask 500 ML	Bsgw Avon- Glass - (R)	470
81	Stop Clock	Acculab	588
	Stop Clock	ESSAL (ST/1)	809
82	Suction Flask 500 ML	Borosil	685
	Suction Flask 500 ML	Bsgw Avon- Glass - (R)	529
83	Suction Pump Low pressure	Hoverlabs	6370
	Suction Pump Low pressure	LALCO	7350
84	Test Tube brushes		8
85	Test Tube Holder - Chromium plated with wooden handle-Iron	Acculab	25
86	Test Tube stand -10 Racks	POLYLAB	245
87	Test Tube (Boiling)18X 150	Borosil	25
	Test Tube (Boiling)18X 151	Bsgw Avon- Glass - (R)	18
88	Test Tube (Boiling)15X 125	Borosil	13
	Test Tube (Boiling)15X 126	Bsgw Avon- Glass - (R)	10
89	TLC Sheets (Silicage Coated Alluminium Sheets) set of 25	Merck	5390
90	TLC Chambers	Borosil/Bsgw Avon- Glass - (R)	1100
91	TLC Iodination Chamber	Borosil/Bsgw Avon- Glass - (R)	350
92	TLC UV Chamber	Acculab	7350
93	Tripod Stand	LALCO	123
	Tripod Stand		245
94	Vaccum decicator - 100 mm Ground Flange	Borosil/Bsgw Avon- Glass - (R)	5000
95	Vaccum Pump low pressure	BIOTECH	18620
96	Viscometer	Avon - Glass ®	157
97	Wash bottle 250 ML	POLYLAB	147
98	Watch Glass Small/ Medium	Borosil	95
	Watch Glass Small/ Medium	Bsgw Avon- Glass - (R)	103
99	Water bath heavy duty made of copper Size - 6"- Superior	LALCO	392
	Water bath heavy duty made of copper Size - 6"- Superior		388
100	Water Circulation pump 0.025 HP Capacity & rubbers tybes set	Acculab	1764
101	Whatman Fliter paper grade 1 Circular	Whatman	2156
102	Wire guage - 6"x6" - with frame double asbestos		44
103	Racks for Reagents wood/steel	Godrej	—

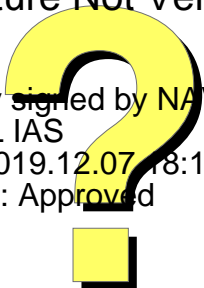
File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No	Name of the Equipment (With Specifications)	Make	HACA (unit price in Rs.)
104	Iron almirah with glass	Godrej	—
105	Iron almirah	Godrej	—
106	Lab tables wooden with asbestos sheets		—
107	Stools		—

Commissioner of Collegiate Education &
State Project Director, RUSA

Signature Not Verified

Digitally signed by NAVIN
MITTAL IAS
Date: 2019.12.07 18:15:41 IST
Reason: Approved



Department of Microbiology

Equipment required for B.Sc - Practicals

SEMESTER 1 TO VI FOR A BATCH OF 25-30 STUDENTS

S.No.	Instrument	Specifications	Quantity
1	Autoclave Vertical Medium size	40-50 liter capacity, Stain less steel, Pressure gauge, manual pressure release, Safety valves, automatic timers/alarms BIS/ISI standard, ISO certified	01
2	Autoclave portable	25 Liter capacity Stain less steel, Pressure gauge, manual pressure release, Safety valves, ISO certified	01
3	Hot air oven	Double walled with high quality insulated steel. Outer walls of epoxy coated GI sheets. Adjustable shelves (FIVE) Insulated door with mechanical lock 50-65 liter capacity. Digital display with automatic controls, ISO certified	01
4	Incubator	Double walled inner chamber with corrosion resistant stainless steel, outer with powder coated insulation inner glass door, stainless steel adjustable shelves, 100 liter capacity ambient to 70°C temperature range microprocessor based digital display with alarms, ISO certified	01
5	BOD incubator	Double walled inner chamber with corrosion resistant stainless steel, outer with powder coated insulation inner glass door, stainless steel adjustable shelves, 90-100 liter capacity 2°C 70°C temperature range microprocessor based digital display with alarms, ISO Certified	01
6	Orbital shaker incubator	Double walled inner chamber with corrosion resistant stainless steel, outer with powder coated insulation inner glass door, stainless steel adjustable shelves, 150-200 liter capacity, ambient-70°C temperature range microprocessor based digital display With alarms, ISO certified	01
7	Refrigerator	Approximately 260 liter Capacity and above double door, Freezer-20°C Refrigerator 2-8°C Display and temperature controls, Frost free with in built in voltage stabilizer	01
8	Laminar air flow	4ft x 2ft x 2ft stain less steel table with LCD display show parameters, vertical air flow with 0.3 micorn particle retention HEPA filters with UV light and Fluorescent Light tubes side mounted switches for three electrical sockets for ancillary equipment including gas connection, ISO certified	01
9	Distillation /unit for distilled water	4 Liter, Stain less steel wall mounted water distiller as per requirement, ISO certified	01
10	Digital colorimeters	Microcontroller based digital DISPLAY WITH 450, 470,510,520,540,570,600, & 670 nm with all accessories such as Cuvettes, cuvette stands etc ISO certified	05

File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No.	Instrument	Specifications	Quantity
11	UV-Visible Spectrophotometer	Double beam with sample and reference cuvette positions, Halogen lamp for visible and Deuterium lamp for UV as light source, Resolution 0.1-0.2nm or better Wavelength range 180nm to 1100nm with all accessories like quartz Cuvettes with 0.5 ml, 1ml and 3 ml capacity etc, ISO certified quality with service and operation manual, ISO certified	01
12	Single pan analytical balance (Electronic balance)	With 0.1mg-200mg minimum specificity	01
13	Digital balance	0.1mg sensitivity with digital display	01
14	Digital colony counter	Digital display, Magnifying lens, Petri dish of medium and large size acceptance, ISO certified	01
15	Water bath	Tank: High grade SS tank, Capacity : 5 to 8 litre, Temperature range : Ambient to 99°C, Temperature accuracy: $\pm 0.2^{\circ}\text{C}$, Temperature control : Should provide with a microprocessor based variable digital temperature controller with digital display. Timer : 0.1 Hour to 99.9 Hours & continuous Safety protection : User settable and fixed thermal cut-out. : Low level water alarm, safety shut down audible/visual alarm Operating voltage : 230 \pm 10VAC, 50Hz. Tank design for easy cleaning and draining Comprehensive warranty for two years After Sale, Service should be available promptly ISO certified	01
16	Hot Plate	Heating plate size of minimum 120 x120mm maximum heating plate temperature 380°C , ISO Certified	01
17	Magnetic Striker	10-15 CM length and width surface and all accessories of different stir bars, ISO certified	01
18	Vortex mixer	Speed up to 3000 RPM, ISO certified	02
19	Sahil's Haemoglobinometer	square tube type glass meter with all accessories	12
20	Haemocytometer	Complete set with RBC WBC pipetters	12
21	MICRO PIPETTES	2-20 μ Capacity, 20-200 μ capacity, 100-1000 μ capacity , ISO Certified (INDIAN BRAND)	06 (Two each with specific capacities)
22	Test Tube racks	Different hole size 18 mm and 25 mm diameter (Aluminium make with 24 holes)	25
23	Microwave oven	Minimum size	01
24	Microfuge	15000g with adequate RPM (16000-20000RPM) with 1.5 - 2.5 ML eppendorf tubes capacity with digital display and time set automatic controls	01
25	Centrifuge	5000 RPM and rotor to hold 15 ml -20ml centrifuge tubes with digital display and time set automatic controls	01

File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No.	Instrument	Specifications	Quantity
26	MICROSCOPE BINACULAR	Superior exported glass lenses olympus made with 5x, 10x, 40-45 x and 100 x objectives lenses with 10 x eye lenses and all accessories, mechanical stage with illumination source with haligen lamp duration time of over 10000 hours	04
27	MICROSCOPE MONOCULAR	Superior exported glass lenses olympus made with 5x, 10x, 40-45 x and 100 x objectives lenses with 10 x eye lenses and all accessories,	12
28	Antibiotic disc dispenser	Six to eight disc distribution per plate	01
29	Paper Chromatography chamber	Chamber with troughs for ascending and descending chromatography cabinet Sizes 6" X8"X9" capacity 150ml	01
30	Filtration unit for filter sterilization of heat sensitive liquids	with suction motor pump, Filters with 0.45 and 0.22µm pore size etc will all accessories for fluid sterilization.	01
31	UV Transilluminator	Two UV tubes for illumination each 8 W Long wave UV light 366nm and short wave UV light 254nm. UV filter in viewing window	1
32	Bunsen burners	Make : Brass	5
33	Burette stands	Stainless steel	10
34	Tripod stands with asbestos mesh		8
35	Bacteriological inoculation loops	Local make	25
36	Permanent slides	Micro Visual	1 each
		Gram positive bacilli	
		Gram Negative bacilli	
		Gram Positive Cocci	
		Staphylococcus	
		Nostoc	
		Spirulina	
		Diatoms	
		Oscillatoria	
		Chlorella	
		Chlamydomonas	
		Saccharomyces	
		Rhizopus	
		Aspergillus	
		Penicillium	
		Fusarium	
		Mucor - Asexual	
		Klebsiella	
		Escherichia Coli	
		Pseudomonas	
		Mycobacterium	
		Entamoebahistolytica	
		Plasmodium Parasite	
		Vibrio	
		Lactobacillus	
		Azospirillum	
		Azotobacter	
		Rhizobium	
		Spirillum	

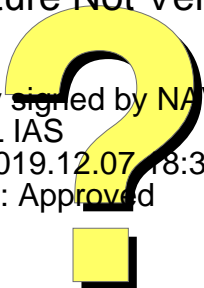
File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No.	Instrument	Specifications	Quantity
37	SPECIMENS	MICROVISUAL	1 each
		Tikka disease of Groudnut	
		Citrus canker	
		Bhendi yellow vein mosaic	
		Tomato leaf curl	
		Little leaf of Brinjal	
		Smut	

Commissioner of Collegiate Education &
State Project Director, RUSA

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Date: 2019.12.07 18:36:03 IST
Reason: Approved



Department of Microbiology

Equipment required for B.Sc - Practicals

SEMESTER 1 TO VI FOR A BATCH OF 25-30 STUDENTS

S.No.	Instrument	Specifications	Make	HACA (unit price in Rs.)
1	Autoclave Vertical Medium size	40-50 liter capacity, Stain less steel, Pressure gauge, manual pressure release, Safety valves, automatic timers/alarms BIS/ISI standard, ISO certified	EDISON LABHOSP SISCO	27930
2	Autoclave portable	25 Liter capacity Stain less steel, Pressure gauge, manual pressure release, Safety valves, ISO certified	ELICO EDISON SISCO	13916
3	Hot air oven	Double walled with high quality insulated steel. Outer walls of epoxy coated GI sheets. Adjustable shelves (FIVE) Insulated door with mechanical lock 50-65 liter capacity. Digital display with automatic controls, ISO certified	ELICO EDISON SISCO	9310
4	Incubator	Double walled inner chamber with corrosion resistant stainless steel, outer with powder coated insulation inner glass door, stainless steel adjustable shelves, 100 liter capacity ambient to 70°C temperature range microprocessor based digital display with alarms, ISO certified	ELICO EDISON SISCO	18130
5	BOD incubator	Double walled inner chamber with corrosion resistant stainless steel, outer with powder coated insulation inner glass door, stainless steel adjustable shelves, 90-100 liter capacity 2°C 70°C temperature range microprocessor based digital display with alarms, ISO Certified	ELICO EDISON SISCO	41160
6	Orbital shaker incubator	Double walled inner chamber with corrosion resistant stainless steel, outer with powder coated insulation inner glass door, stainless steel adjustable shelves, 150-200 liter capacity, ambient-70°C temperature range microprocessor based digital display With alarms, ISO certified	ELICO EDISON SISCO	92610
7	Refrigerator	Approximately 260 liter Capacity and above double door, Freezer-20°C Refrigerator 2-8°C Display and temperature controls, Frost free with in built in voltage stabilizer	LG WHIRLPOOL SAMSUNG	18130
8	Laminar air flow	4ft x 2ft x 2ft stain less steel table with LCD display show parameters, vertical air flow with 0.3 micorn particle retention HEPA filters with UV light and Fluorescent Light tubes side mounted switches for three electrical sockets for ancillary equipment including gas connection, ISO certified	Webcon Edison Biotech	93982

File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No.	Instrument	Specifications	Make	HACA (unit price in Rs.)
9	Distillation /unit for distilled water	4 Liter, Stain less steel wall mounted water distiller as per requirement, ISO certified	ACCULAB	5684
10	Digital colorimeters	Microcontroller based digital DISPLAY WITH 450, 470,510,520,540,570,600, & 670 nm with all accessories such as Cuvettes, cuvette stands etc ISO certified	ELICO SISCO	8722
11	UV-Visible Spectrophotometer	Double beam with sample and reference cuvette positions, Halogen lamp for visible and Deuterium lamp for UV as light source, Resolution 0.1-0.2nm or better Wavelength range 180nm to 1100nm with all accessories like quartz Cuvettes with 0.5 ml, 1ml and 3 ml capacity etc, ISO certified quality with service and operation manual, ISO certified	ELICO LALCO BIOTECHNICS	240100
12	Single pan analytical balance (Electronic balance)	With 0.1mg-200mg minimm specificity	DHONA	13230
13	Digital balance	0.1mg sensitibity with digital display	Keroy Schimadzu	8722
14	Digital colony counter	Digital display, Magnifying lens, Petri dish of medium and large size acceptance, ISO certified	LALCO QUEBEC BIOTECHNICS EDISON	7399
15	Water bath	Tank: High grade SS tank, Capacity : 5 to 8 litre, Temperature range : Ambient to 99°C, Temperature accuracy: $\pm 0.2^{\circ}\text{C}$, Temperature control : Should provide with a microprocessor based variable digital temperature controller with digital display. Timer : 0.1 Hour to 99.9 Hours & continuous Safety protection : User settable and fixed thermal cut-out. : Low level water alarm, safety shut down audible/visual alm Operating voltage : 230 \pm 10VAC, 50Hz. Tank design for easy cleaning and draining Comprehensive warranty for two years After Sale, Service should be available promptly ISO certified	LABACCU LABHOSP EDISON	11270
16	Hot Plate	Heating plate size of minimum 120 x120mm maximum heating plate temparature 380°C , ISO Certified	CHROMUS BIOTECH	3479
17	Magnetic Striker	10-15 CM length and width surface and all accessories of different stir bars, ISO certified	CHROMUS BIOTECH	10682
18	Vortex mixer	Speed up to 3000 RPM, ISO certified	CHROMUS BIOTECH	12299
19	Sahil's Haemoglobinomet	square tube type glass meter with all accessories	LABY	637

File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No.	Instrument	Specifications	Make	HACA (unit price in Rs.)
20	Haemocytometer	Complete set with RBC WBC pipetters	FISCHER SCIENTIFIC THOMAS SCIENTIFIC HAUSSER SCIENTIFIC	1813
21	MICRO PIPETTES	2-20 μ Capacity, 20-200 μ capacity, 100-1000 μ capacity , ISO Certified (INDIAN BRAND)	THERMO FISHER FINEPIPET PIPETMAN	1421
22	Test Tube racks	Different hole size 18 mm and 25 mm diameter (Aluminium make with 24 holes)	Brnaded, Shiv	191
23	Microwave oven	Minimum size	LG	6811
24	Microfuge	15000g with adequate RPM (16000-20000RPM) with 1.5 - 2.5 ML eppendorf tubes capacity with digital display and time set automatic controls	LABY REMI	16170
25	Centrifuge	5000 RPM and rotor to hold 15 ml -20ml centrifuge tubes with digital display and time set automatic controls	ACCULAB REMI LABY	19551
26	MICROSCOPE BINACULAR	Superior exported glass lenses olympus made with 5x, 10x, 40-45 x and 100 x objectives lenses with 10 x eye lenses and all accessories, mechanical stage with illumination source with haligen lamp duration time of over 10000 hours	Olympus	38710
27	MICROSCOPE MONOCULAR	Superior exported glass lenses olympus made with 5x, 10x, 40-45 x and 100 x objectives lenses with 10 x eye lenses and all accessories,	Olympus	16170
28	Antibiotic disc dispenser	Six to eight disc distribution per plate	Himedia Thermofisher	—
29	Paper Chromatography chamber	Chamber with troughs for ascending and descending chromatography cabinet Sizes 6" X8"X9" capacity 150ml	LABY	3871
30	Filtration unit for filter sterilization of heat sensitive liquids	with suction motor pump, Filters with 0.45 and 0.22 μ m pore size etc will all accessories for fluid sterilization.	INDIAN BRNADS	19110
31	UV Transilluminator	Two UV tubes for illumination each 8 W Long wave UV light 366nm and short wave UV light 254nm. UV filter in viewing window	ACCULAB	33859
32	Bunsen burners	Make : Brass		196
33	Burette stands	Stainless steel	Edison	441
34	Tripod stands with asbestos mesh			279
35	Bacteriological inoculation loops	Local make		88

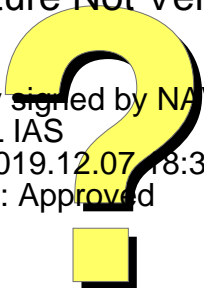
File No.RUSA-EQUP/1/2019-O/o AO-RUSA

S.No.	Instrument	Specifications	Make	HACA (unit price in Rs.)
36	Permanent slides	Micro Visual		29
		Gram positive bacili		78
		Gram Negative bacili		78
		Gram Positive Cocci		78
		Staphylococcus		78
		Nostoc		78
		Spirulina		78
		Diatoms		78
		Oscillatoria		78
		Chlorella		78
		Chlamydomonas		78
		Saccharomyces		78
		Rhizopus		78
		Aspergillus		78
		Penicillium		78
		Fusarium		78
		Mucor - Asexual		78
		Klebsiella		78
		Escherichia Coli		78
		Pseudomonas		78
		Mycobacterium		78
		Entamoebahistolytica		78
		Plasmodium Parasite		78
		Vibrio		78
		Lactobacillus		78
		Azospirillum		78
		Azotobacter		78
		Rhizobium		78
		Spirillum		78
37	SPECIMENS	MICROVISUAL		137
		Tikka disease of Groudnut		137
		Citrus canker		137
		Bhendi yellow vein mosaic		137
		Tomato leaf curl		137
		Little leaf of Brinjal		137
		Smut		137

Commissioner of Collegiate Education &
State Project Director, RUSA

Signature Not Verified

Digitally signed by NAVIN
MITTAL IAS
Date: 2019.12.07 18:32:41 IST
Reason: Approved



**Proceedings of the Commissioner of Collegiate Education &
State Project Director, RUSA
Present : Sri Navin Mittal, IAS**

Sub: RUSA – Physics Lab Equipment – Purchase of Equipment by the Principals of Government Degree Colleges – Orders – Issued.

Ref: 1. Review meetings held with the Principals of Government Degree Colleges on 20.11.2019, 21.11.2019 & 25.11.2019.
2. Memo No.03/RUSA/EQUIPMENT/2018 dated 07-08-2018

In the meetings held with the Principals of Government Degree Colleges, it was observed that most of the Colleges required Science Lab Equipment for Practicals in the CBCS Curriculum. In this regard the CCE & SPD, RUSA immediately ordered for the Subject Experts Committee which was constituted vide reference 2nd cited, to convene and finalize the required quantity of Lab Equipment per subject for a batch of 25 to 30 students. Accordingly, the Subject Experts for Physics have submitted their requirements as of now.

The lists were circulated by the Project Officer, RUSA to HACA, SETWIN and NSIC, Hyderabad with a request to furnish the rates per item. While HACA and SETWIN have furnished the rates, NSIC has withdrawn from participating. Consequently the rates per item and the quantities per batch for the subjects mentioned above, are prepared and furnished for reference. Hence, the Principals are informed to procure Lab Equipment for Physics from HACA, Hyderabad as the prices quoted by HACA in comparison to SETWIN are Low. Based on the details appended to this Proceeding, orders should be placed while obtaining prior permission from the CCE & SPD, RUSA for administrative sanction of expenditure, invariably.

Signature Not Verified

Digitally signed by NAVIN MITTAL
IAS
Date: 2019.12.18 15:13:30 IST
Reason: Approved

**Commissioner of Collegiate Education &
State Project Director, RUSA**

To
The Principals
Government Degree Colleges

B.Sc. Physics Practicals for Semesters I & II (Mechanics, Waves & Oscillations)**For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Bar Pendulum (with equidistant hole, two knife edge & wall clamp)	With equivalent specifications from any firm	1110
2	Battery eliminator (2, 4, 6, 8,10, 12 V and 2 amps dc with rotary switch)		1206
3	Beaker (plastic)		145
4	Brass circular metal disc with wall clamp (torsional pendulum)		1544
5	Brass metal bob with hook (radius 2.5 cm)		150
6	Capillary tube of uniform bore with rubber cork		121
7	Coupled Oscillator, wall fixing type with pendulum bobs		434
8	Recer Digital Stop Watch		579
9	Analogue weighing machine (upto 5 kg)		1206
10	Electrical tuning fork, bench clamp with pulley and pan		5066
11	Fly-wheel moving in new ball bearings with counter		4729
12	Funnel with rubber tube and Pinch cork		1206
13	Wooden Half meter scales superior quality		63
14	Lamp and scale arrangement		5018
15	Large trough and Circular mirror		531
16	Measuring Jar (plastic)		145
17	Wooden Meter Scale : superior quality		97
18	Retort stand with clamp and boss head		531
19	Rubber Cork with hole at the center		12
20	Rubber tipped hammer		169
21	Cathode Ray Oscilloscope (Dual trace with 20 MHz)		23643
22	Screw Gauge 20 mm steel screw superior		347
23	Signal/function generators(1 MHz, Digital Display)		5549
24	Slotted Weights 2.5 kg		579
25	Sonometer (Teak wood with bridges and wires)		1689
26	Spiral springs of different spring constants		2171
27	Spirit level		116

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
28	Split rubber cork		12
29	Steel, Brass and Copper wires per coil		212
30	Thin strong cotton string (thread)		19
31	Travelling Microscope Horizontal, Vertical scale, cross motion		12063
32	Tuning forks of different frequencies (set of 8 welch type large)		917
33	Vernier Calliperse student grade with wheel		154
34	Volume Resonator (2 Ltr.)		1592
35	Wax		48
36	Physical Weight boxes (1, 2, 5, 10, 20, 50, 100, 200 gms)		627
37	Weight hangers (5x50 gms, slotted weights)		241
38	Aluminum with hooks in all planes (weight 800 gm - Al)		917
39	Young's modulus of bending of beam heavy metal strip, table clamp with knife edges & weight carrier for uniform & nonuniform bending		2654

Abstract -B.Sc. Physics Practicals Paper-III (Thermal Physics)**For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Lees disc apparatus including 3 bad conductor discs	With Equivalent specifications from any firm	5139
2	Steam generator (boiler) 1 Litr.		979
3	Thermometers (0.1 degree least count)		169
4	Pressure rubber tube (20 mts)		48
5	Stefan's Constant Apparatus		7720
6	Newton's law of cooling apparatus		2413
7	Heating Efficiency of an Electrical Kettle with varying voltages set		3812
8	Potentiometer 10 wires 1 mt. long fully laminated $\frac{3}{4}$ " wooden board stretched, over pulleys. Total resistance 10 ohms with pencil jockey		2316
9	Daniel cell		869
10	Rheostat (2.3 A, 100 ohms)		1544
11	Resistance box 10000 ohms		1882
12	High resistance Box 5 kilo ohms		434
13	Galvanometer		376
14	Borosil Beakers (500 ml)		116
15	Thermo couple (copper - iron)		338
16	4 way commutator		309
17	Hot plate with thermostat		4053
18	Connecting wires multi stand		338

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
19	Copper Calorimeter with a wooden lid having two holes for inserting thermometer for cooling curve of metallic body		1206
20	Rubber stoppers with holes (2)		10
21	Thermister characteristics setup with builtin calorimeter, variable resistance, power supply, Galvanometer and thermometer		3812
22	Specific heat of solid rod (Graphite) sample in cylindrical shape		13510
23	study mechanical energy to heat setup		8203

Abstract - B.Sc. Physics Practicals Paper-IV (Optics)**For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Frenel's Biprism setup	With equivalent specifications from any firm	16888
2	Sodium Vapor lamp setup		6659
3	Spirit level		116
4	Magnifying glass (Reading lens)		174
5	Newton's Rings Apparatus (All in built)		9264
6	Spherometer (to know the radius of convex lens)		241
7	Plane transmission grating		1399
8	Mercury vapour lamp setup		2750
9	Magnifying Torch light		627
10	Diode laser setup with builtin power supply		4777
11	Diffraction Grating 2500 lpi		1399
12	Polarimeter Apparatus with bi-quartz system		8637
13	Pulfrich refractometer Apparatus setup		1206
14	Wedge method-thickness of wire setup		1206
15	Crown Prism (Dispersive power of prism)		627
16	Spectrometer (60' and 175 mm scale with round adjustable slit)		13993
17	Telescope for resolving power		3619
18	Slit for resolving power with micrometer head		1351
19	Wiremesh		290
20	Mercury (250 Bottle)		3378
21	Watch glass pack of 12		58

Abstract - B.Sc. Physics Practicals Paper V (Electromagnetism)**For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Thevenin's and Norton's Theorem circuit Board with 2 digital meters	With equivalent specifications from any firm	3378
2	Super Position Theorem circuit board with 2 digital meters		3378
3	Maximum Power Transfer Theorem circuit Board		3378
4	Carey Foster Bridge		1399
5	Battery Eliminator		1206
6	Variable Resistance Box (1000 ohms)		1882
7	Galvanometer		376
8	High Resistance Box (15000 ohm)		2171
9	Unknown resistance coil		58
10	A Dry Cell		29
11	A Plug Key		77
12	Function Generator/Signal Generator 1 MHz digital display		5549
13	Anderson's Bridge circuit Board with oscillator & Head phone		6659
14	Ballistic Galvanometer		5018
15	Lamp & Scale Arrangement		5018
16	Fixed condenser		290
17	Digital multi meter		1206
18	Commutator round four plugs		314
19	High resistance coil 10K ohms		434
20	Rheostat 2.3A 60 ohms		1544
21	Desauty's bridge set-up with oscillator & Head phone		6659
22	Rayleigh's Bridge set-up with oscillator & Head phone		12063

Abstract - B.Sc. Physics Practicals Paper VI (Modern Physics)**For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Mercury Valve Board	With equivalent specifications from any firm	1737
2	Stabilized Power Supply for Mercury Valve		4053
3	Helium - Neon laser light (5 mw)		23643
4	Plane diffraction grating		1399
5	Determination of work function by photoelectric effect: Power supply with two digital meters,optical bench, five glass filters, Built in Mercury vapour lamp, Photo Cell inbox		23643
6	Hall Effect Experiment-Electro Magnets coils (10000 Gauss), Digital Gauss Meter (20 KGauss) & Hall Probe setup, Electro Magnet Power supply (5 amp.),		50180
7	Plane Transmission Grating		1737
8	hydrogen gas discharge tube with transformer		11580
9	Energy Gap of Intrinsic Semiconductor Circuit Board-Apparatus		3812
10	Single slit (with stand)		1206
11	Double slit (with stand)		1592
12	Plank's constant using LEDs-Power supply with digital voltmeter , Digital Ammeter, Digital Temperature Indicator with sensor & Oven, and four different calibrated LEDs		14379
13	G.M.Counter experimental setup with single source		65620

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Equipment required for B.Sc - Practicals

(For one batch of 25-30 students)

Sl.No.	Name of the articles	Specification	No. of Units
1	Charts	As per syllabus	265
2	Slides	As per syllabus	80
3	Models	As per syllabus	30
4	Specimens	As per syllabus	84
5	Osteology	As per syllabus	Articulated one
6	Osteology	As per syllabus	Loose set
7	Burettes	50 ml	60
8	Burettes stands		60
9	Porcelain tile		60
10	Pipettes - graduated	2 ml	10
11	Pipettes - graduated	5 ml	10
12	Pipettes - graduated	10 ml	10
13	Conical flasks	250 ml	10 each
14	Petri Dishes	2 inches	30
15	Petri Dishes	5 inches	30
16	Test tubes with rim	5ml -- 12 * 75 mm	100
17	Test tubes with rim	10 ml -- 15 * 150 mm	100
18	Test tube stand / Rack - aluminium	aluminium 12 * 15	10
19	Test tube stand - plastic	To hold 6 tubes	60
20	Pipette holder / stand		60
21	Reagent bottles	250 ml	25
22	Beakers	50 ml	20
23	Beakers	100 ml	20
24	Beakers	250 ml	20
25	Measuring jars	25 ml	5
26	Measuring jars	50 ml	5
27	Measuring jars - Glass	250 ml	5
28	Three cavity SLIDES		1 box
29	Cover slips	18 * 18 mm	1 box
30	Glass slides	plain 76 * 26 * 1 mm	1 pkt
31	Glass troughs	18 inches DIA	2
32	Dissection Box		2
33	pH Meter	with glass electrodes etc	1
34	pH Meter	Digital, pocket type	1
35	Microscope - Monocular	Eye-5x/10x& obj-10x,40x	15
36	Microscope - Illuminator		15
37	Microscope - projection type	with Hood	1
38	Regulated Hot water bath	40*30*10 cm, 0-100 C, 12 holes, steel body	1
39	Sahli's Haemoglobinometer		30
40	Neubar Haemocytometer		30
41	DLC cell counter		5
42	ELISA kits		4
43	Refrigerator	Domestic type - 200 Lts	1
44	Horizontal slab Gel Electrophoresis	Unit with power pack and accs..	1
45	Laboratory working tables		12

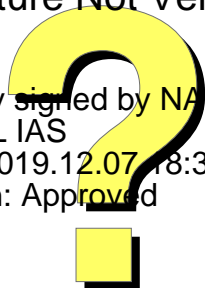
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Sl.No.	Name of the articles	Specification	No. of Units
46	Laboratory stools	Iron / Plastic	60
47	Almirahs		4
48	Almirah - for charts		2
49	Almirah Museum		4
50	Almirah books		1
51	Laboratory oven	250 C, 14*14*14 inches, 2 shelves	1
52	Digital balance	Top loading, 1 mg Readability	1
53	Digital balance	10 g Readability	1
54	Dissection trays with wax		60
55	Stop clock		1
56	Slide storage box - permanent		2
57	Slide Cabinet - multiple trays		1
58	Wooden racks for Reag. Bottles		12
59	Crucibles Porcelain	50 ml	2
60	Steel spatula	6 inches	10
61	Mortar and pestle	4 inch DIA	2

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Equipment required for B.Sc - Practicals

(For one batch of 25-30 students)

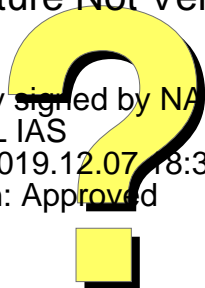
Sl.No.	Name of the articles	Specification	Make	HACA (unit price in Rs.)
1	Charts	As per syllabus	Bio - Visual	608
2	Slides	As per syllabus	Bio craft	34
3	Models	As per syllabus		784
4	Specimens	As per syllabus		147
5	Osteology	As per syllabus		833
6	Osteology	As per syllabus		784
7	Burettes	50 ml	Borosil	570
8	Burettes stands			245
9	Porcelain tile			20
10	Pipettes - graduated	2 ml	Borosil	190
11	Pipettes - graduated	5 ml	Borosil	190
12	Pipettes - graduated	10 ml	Borosil	200
13	Conical flasks	250 ml	Borosil	120
14	Petri Dishes	2 inches	Borosil	190
15	Petri Dishes	5 inches	Borosil	240
16	Test tubes with rim	5ml -- 12 * 75 mm	Borosil	10
17	Test tubes with rim	10 ml -- 15 * 150 mm	Borosil	20
18	Test tube stand / Rack - aluminium	aluminium 12 * 15		441
19	Test tube stand - plastic	To hold 6 tubes		25
20	Pipette holder / stand			98
21	Reagent bottles	250 ml	Borosil	350
22	Beakers	50 ml	Borosil	50
23	Beakers	100 ml	Borosil	75
24	Beakers	250 ml	Borosil	100
25	Measuring jars	25 ml	Borosil	350
26	Measuring jars	50 ml	Borosil	370
27	Measuring jars - Glass	250 ml	Borosil	450
28	Three cavity SLIDES		Blue star	98
29	Cover slips	18 * 18 mm		98
30	Glass slides	plain 76 * 26 * 1 mm		118
31	Glass troughs	18 inches DIA		980
32	Dissection Box			343
33	pH Meter	with glass electrodes etc	Elico	6860
34	pH Meter	Digital, pocket type		1470
35	Microscope - Monocular	Eye-5x/10x& obj-10x,40x	olympus	17101
36	Microscope - Illuminator			980
37	Microscope - projection type	with Hood		17640
38	Regulated Hot water bath	40*30*10 cm, 0-100 C, 12 holes, steel body		14700
39	Sahlis Haemoglobinometer			784
40	Neubar Haemocytometer			1568

Sl.No.	Name of the articles	Specification	Make	HACA (unit price in Rs.)
41	DLC cell counter			—
42	ELISA kits			1960
43	Refrigerator	Domestic type - 200 Lts		14700
44	Horizontal slab Gel Electrophoresis	Unit with power pack and accs..		19600
45	Laboratory working tables			—
46	Laboratory stools	Iron / Plastic		—
47	Almirahs			—
48	Almirah - for charts			—
49	Almirah Museum			—
50	Almirah books			—
51	Laboratory oven	250 C, 14*14*14 inches, 2 shelves		19600
52	Digital balance	Top loading, 1 mg Readability	Keroy / Dhona	12534
53	Digital balance	10 g Readability		1470
54	Dissection trays with wax			333
55	Stop clock			784
56	Slide storage box - permanent			980
57	Slide Cabinet - multiple trays			1960
58	Wooden racks for Reag. Bottles			833
59	Crucibles Porcelain	50 ml		764
60	Steel spatula	6 inches		49
61	Mortar and pestle	4 inch DIA		245

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Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
1	Duel desks	The overall dimensions should be of size 1200 mm X 850 mm X 750/800 mm. The Desk panel (1200x330x18mm), Seat (1200x265x18mm) and Back (1200x260x18mm) should be made of 18 mm thick Pre-Laminated Boards with TEAK WOOD beading with fine polish on all sides. The understructure should be made of 25.4 mm x25.4mm x 1.6 mm thick powder coated ERW frames at base which should be welded to the desk and seat supports that are made of tubular frame of MS ERW Square Tube of size 25.4mmx25.4mmx 1.6mm thick. (2) vertical frames at base and back of seat made of 25.4 mm x 25.4 mm x 1.6 mm thick powder coated ERW tubes should be provided as Stiffeners between them . These frames should be closed with plastic caps. Additional horizontal supports of tubular frame of MS ERW Square Tube of size 25.4mmx25.4mmx 1.6mm thick should be provided below the desk and seat to add rigidity to the Desk. Two supports shall be given for back support with 25.4 x 25.4 x 1.6 mm tubes support of writing pad on two side shall be provided with L' section channel fitted with six screws. Screw fitting shall be given for all 4 sides. Gap between two legs for seat	1	4800	864	5664

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
2	'S' Type Chairs	Seat and back nylon cane netted, seat and back frame made of CR Tube 25.4mm, 1.22 mm thickness/wooden. Seat size 46 cm x 46 cm back size 46 cm (W) x 38 cm (H), back is (Curve model). The understruture assembly is a cantilever type frame made of CR Tube dia 25.4 cm 14 guage 2 mm thickness arms shall be of injection moulded foam poly propylene hands with PVC Bush.	1	1990	358	2348

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
3	Computer Chairs	Supply, delivery and assembling at site Chair for office staff/Computer chair as shown in the drawing with the following specifications: The overall dimensions of the chair should be 56(W)x54cm(D)x81.5(H). The seat should be made from 1.2cm. thick hot pressed plywood and back injection moulded from black Co-polymer Polypropylene, upholstered with fabric and moulded Polyurethane foam having density 30 +/-2 kg/m3 and Hardness = 20 +/- 2 at 25% compression together with seat and back covers. The back foam should be designed with contoured lumbar support for extra comfort. The back should be provided with a meachism for flexing the back. Steel should confirm to as per IS 513.For durability Steel should undergo pre treatment process and phosphated for better adhesion of paint as per IS std 3618 1996.The seat and back covers shall be injection moulded in black Co-polymer Polypropylene. The armrests should be of black integral skin polyurethane with 50-70 Shore 'A' Hardness and reinforced with M.S. insert. The P.U.armrests are then fixed to black powder coated armrest brackets	1	2900	522	3422

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
4	Computer table	Supply, delivery and assembling at site Computer table as should be drawn with following specification. Overall dimensions should be 750mm (L) x 600 mm (W) x 750 mm (H). The table top should be 25mm thickness with prelaminated particle board of confirming to IS 12823. The all edges should be of wood beading keyboard of size 600mm(L) x 200mm(W) with box type model, telephonic channel 18mm prelaminated particle board, with bottom CPU stand L type shape with back support 18mm prelaminated particle board of CPU stand size 650mm x 450mm x 200mm L type and two legs inside between 18mm prelaminated particle board fitted including all charges and taxes as per rules. The under structure should be top bottom frame 25x25 CR square tube 1.60mm thickness horizontal bottom support 60x20 CR rectangular tube 1.22mm thickness, 4 nos. legs support 20x20 CR square tube 1.60mm thickness. Other frame supports 25x25 CR square tube 1.60mm thickness.	1	3600	648	4248

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
5	Office Table	The over all dimension should be 1200 mm x 590 mm x 750 mm. The table top should be 18mm thick with Pre-Laminated Board (PLB), of approved quality and shade, Grade II Type II conforming to IS:12823. The edges should be sealed with 2mm thick hot preessesd PVC beading. The understructure should be top frame C section 40 x 40 mm 1 mm thickness supported alround tubular frame of CR Round tube of 25.4 mm , 1.2mm thick confirming to IS 513. The tubular frame should be made of CR Round Tube of Dia 25.4mm, 1.2mm thick. For storage, the Table should have 3 drawer unit the overall dimention 350 (w)x 430(H)x 560(D) mm in which the shell and drawer tray shall be 0.5 mm thick CRCA MS, drawer front of 0.8 mm thick CRCA MS sheet, provided with 6 Lever Cam Lock and in built plastic handles.	1	4200	756	4956
6	Almariahs (Steel)	size: 1980x900x450 mm, as shown in the drawing with the following specifications: Store well shall be 4 nos. Fixed shelves of inside shelves size 878 x 420 top bottom LH and RH side and back all parts CR sheet 1 mm thickness with mounting. Die cast recess type handle with 3-way locking mechanism should be provided with levelers. Mild steel as raw material should be used, cold rolled close annealed steel used for thickness 0.6 to 1.2 mm range as	1	10300	1854	12154

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
7	Classrooms Tables /small tables	Supply, delivery and assembling at site Classrooms Tables as shown in the drawing with the following specifications: The over all dimension should be 900 mm x 590 mm x 740 mm. The table top has to be made of 18mm thick. Pre-Laminated Board (PLB), of approved quality and shade, Grade II Type II conforming to IS:12823. The edges should be rounded duly sealed with 2mm thick hot preessesd PVC beading. The understructure should have an alround tubular frame of MS ERW Square Tube of size 25.4mm, 1.2mm thick confirming to IS 513. The stands for table should be made of tubular frame of MS ERW Square Tube of size 25.4mm, 1.2mm thick consisting of 1 drawer unit of size 13" x 6", in which the shell and drawer tray shall be 0.5 mm thick CRCA MS sheet, drawer front of 0.8 mm thick CRCA MS sheet and provided with 10 Lever Cam lock and built in plastic handle.	1	3200	576	3776
8	Laboratory Tables	The over all dimentions of the Table shall be 1800X900X750mm. The table top is to be 25 mm thick, Pre-Laminated Board (PLB), Grade II Type II conforming to IS:12823 of approved quality and shade and edges shall be sealed with 2mm thick hot preessesd PVC beading.Square tubular frame of MS ERW Square Tube of size 30mmx30mmx 1.6mm thick, shall be supporting the Top . The legs shall be of dia. 30mm x 30mm, 1.6mm thick, C.R Square tube with two	1	7800	1404	9204

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
9	Lab stools	Supply, delivery and assembling at site Drawing stool . size of 600x300x300 mm and frame and legs supports CR round tube 25.4mm 2 mm thickness with top Stainless Steel 1.20 mm thickness with PVC bushes. The steel should be confirm to IS 513 and for durability, Steel should undergo pre treatment process and phosphate for be adhesion of as per Drawing table. The understructure should rubber bushes should be provided to rest the table on floor.	1	1200	216	1416
10	Storage facility for books	Supply, delivery and assembling at site Glass Door Storewel of Size: 1981 x 916 x 486 mm, as shown in the drawing with the following specifications: Glass Door Storwelmadeup of MS CARCA steel Grade D as per IS 513: 1994 and made of multi-bend construction and inter-locking design and full height length over lapping doors and sides, with two way bolting mechanism and see through Glassdoor, Anti-corrosive treated components and oven baked powder coating process. It should consists of removable RH & LH sides and back material thickness 0.9 mm. Removable RH & LH see through glass main door material thickness 0.9 mm, with 4 plain adjustable shelves of thickness 0.8mm and 3mm thick see through glass(4 nos).	1	12500	2250	14750

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
11	Long size/Reading / Demo Tables	Supply, delivery and assembling at site Reading / Demo Tables as shown in the drawing with the following specifications:Theover alldimentions of the Table shall be 1800X900X740mm. The table top is to be 25 mm thick, Pre-Laminated Board (PLB), Grade II Type II conforming to IS:12823 of approved quality and shade and edges shall be sealed with 2mm thick hot preessesd PVC beading. Ttubular frame of MS ERW Square Tube of size 25.4mmx25.4mmx 1.6mm thick, shall be supporting the Top . The legs shall be of dia. 38.1mm, 1.6 mm thick M.S ERW tube with two horizontal supports and two longitudinal supports and one central bracing between longitudinal supports of of 32 mm OD , 1 mm wall thick M.S ERW tube at the bottom of the frame so as to provide rigidity to the frame and table.	1	7800	1404	9204
12	Slotted Angle Racks	size 1800x900 x 450mm. The Panels shall be of size 900x450mm. Each Panel shall withstand a load of 100 kg/sqmt UDL. The Angles of size 40x40x2mm shall be in a single piece of length 6', without joints and shall confirm to IS: 5986 (ST 42). Open racks with Side straps on two sides(Left and Right), 150mm heigh. The Panels shall be made up of mild steel sheets, not less than 0.8 mm thick and shall confirm to IS 513 D.	1	3850	693	4543

Sl.No	Name of the Item	Discription/Specifications	Quantity	Cost in Rs.	GST @ 18 % in Rs.	Total
13	Chemistry Lab Table	The size 6' x4' x 3' made of 1 1/4"16 gauge MS square steel paint finished pipe frame, 18mm thik plywood acid proof decolim pasted tp with teakwwod beading.	1			
14	Chemical Racks	this is for the above lab table of size 6' long made of french polish & teakwood with two shelves	1			

* Transportation charges are not included