

**Sonopant Dandekar Shikshan Mandalis**  
**Sonopant Dandekar Arts, V.S. Apte Commerce and**  
**M.H. Mehta Science College, Palghar**



**COLLEGE INFRASTRUCTURE**



Sonopant Dandekar Shikshan Mandali's

## Sonopant Dandekar Arts, V.S. Apte Commerce & M.H. Mehta Science College, Palghar

(Best College – University of Mumbai)

(Amongst Top 100 Colleges in India by 'India Today-MDRA Survey 2021)

### COLLEGE INFRASTRUCTURE

Auditorium	1
Cafeteria	2
Computer Center	6
Conference Hall	2
Connectivity NKN	2
Gents Toilet	34
Guest House	2
Gymnasium/Fitness Center	2
Health Center	1
Indoor Stadium	1
Laboratory	29
Ladies Toilet	22
Library	2
Play ground	2
Turf	1
Separate Common Room exclusively for Girls	3
Solar Power Generation	1
Classroom	56



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### COLLEGE INFRASTRUCTURE

Area	Sq. ft / acre
Auditorium	6683.85 Sq. ft
Yoga centre	222.21 sq. ft
Gym	222.21 sq. ft
Seminar Hall	149.13 sq. ft
Nursery-1 (R D Centre) Chickoo Plantation	4.2 acre
Nursery-2 Mango Plantation	6.0 acre
Nursery-3 (Main garden)	2.5 acre
Nursery-4 (Medicinal garden)	0.25000 acre



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### MAIN BUILDING

Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches
Main Building Computer lab	1	946	---	5	57	5	78
Main Building Office	2	800	---	10	24	13	88
Main Building Ladies Common Room	3	590	---	4	25	3	8
Main Building Computer lab	4	385	---	1	30	3	44
Main Building Vice Principal Room	5	450	---	3	8	3	18
Main Building Principal Room	6	450	---	2	20	4	15
Main Building YCMOU Office	7	322	---	6	7	1	19
Main Building Committee room	8	631	---	--	50	2	26
Main Building Management Office	9	450	---	5	25	4	10
Main Building Ladies Common Room	9 A	180	---	3	25	3	10
Main Building Teacher Common Room	10	1289	---	7	52	8	10



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# MAHAVIR BHAVAN

Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches	Tube
Mahavir Bhavan Library	1 – 7	5355 sq.ft.	---	42	240	40	68	69
Mahavir Bhavan	8	890 sq.ft.	60	1	1	5	12	6
Mahavir Bhavan	9	600 sq.ft.	30	6	21	4	13	5
Mahavir Bhavan	10	890 sq.ft.	55	1	1	5	12	6
Mahavir Bhavan	11	890 sq.ft.	59	1	1	5	12	6
Mahavir Bhavan	12	450 sq.ft.	47	1	1	4	12	06
Mahavir Bhavan	13	450 sq.ft.	47	1	1	4	12	06
Mahavir Bhavan	14	890 sq.ft.	68	1	1	5	12	6
Mahavir Bhavan	15	890 sq.ft.	60	1	1	5	12	6
Mahavir Bhavan	16	890 sq.ft.	61	1	1	5	12	6
Mahavir Bhavan	17	890 sq.ft.	60	1	1	5	12	6
Mahavir Bhavan Accounting Auditing	18	450 sq.ft.	---	2	30	3	10	5
Mahavir Bhavan Exam Committee	--	70 sq.ft.	---	2	4	1	8	1



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Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches	Tube
Mahavir Bhavan Vice Principal	--	70 sq.ft.	---	1	12	1	12	3
Mahavir Bhavan	19	890 sq.ft.	48	1	5	2	12	6
Mahavir Bhavan	20	890 sq.ft.	50	1	1	2	12	6
Mahavir Bhavan	21	890 sq.ft.	49	1	1	2	12	6
Mahavir Bhavan	22	890 sq.ft.	50	1	1	2	12	6
Mahavir Bhavan	23	890 sq.ft.	50	1	1	2	12	6
Mahavir Bhavan	24	890 sq.ft.	50	1	1	2	12	6
Mahavir Bhavan	25	890 sq.ft.	45	1	1	5	12	6
Mahavir Bhavan	26	890 sq.ft.	46	1	1	5	12	6
Mahavir Bhavan Ladies Common Room	-	450 sq.ft.	---	3	1	3	5	2
Mahavir Bhavan Holticulture Lab	-	450 sq.ft.	---	2	30	3	10	5



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# THAKUR – BAFNA BHAVAN

Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches	Tube
Thakur – Bafna Bhavan Dept Staff Room	1	462 sq.ft.	---		15	2	22	4
Thakur – Bafna Bhavan Science Lab	2	462 sq.ft.	---	2	1	1	25	5
Thakur – Bafna Bhavan HOD Room	3	48 sq.ft.	---	1	5	1	4	2
Thakur – Bafna Bhavan Science Lab	4	681 sq.ft.	---	1	1	1	18	8
Thakur – Bafna Bhavan Science Lab	5	681 sq.ft.	---	1	1	1	18	10
Thakur – Bafna Bhavan	101	462 sq.ft.	37	1	2	5	15	4
Thakur – Bafna Bhavan	102	462 sq.ft.	39	1	1	5	15	5
Thakur – Bafna Bhavan Research Lab	103	48 sq. ft.	---	1	6	1	21	2
Thakur – Bafna Bhavan	104	681 sq.ft.	---	1	1	5	55	5
Thakur – Bafna Bhavan	105	681 sq.ft.	25	1	1	6	78	10
Thakur – Bafna Bhavan	201	462 sq.ft.	---	1	4	3	33	7
Thakur – Bafna Bhavan	202	462 sq.ft.	---	2	1	3	35	7
Thakur – Bafna Bhavan Staff Patpedhi	203	48 sq. ft.	---	2	7	1	2	2
Thakur – Bafna Bhavan	204	681 sq.ft.	---	1	2	1	15	5
Thakur – Bafna Bhavan	205	681 sq.ft.	---	1	2	1	11	5



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# R. H. SAVE INSTITUTE OF MANAGMENET STUDIES AND RESEARCH

Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches	Tube
BMS Building Computer Lab	1	847 sq. ft.	---	1	44	4	87	6
BMS Staff Room	2	505 sq. ft.	---	3	16	3	38	6
BMS Building Office	3	847 sq. ft.	---	12	32	6	29	6
BMS Building Seminar Hall	4	1500 sq. ft.	---	2	48	10	38	2
BMS Building	5	1500 sq. ft.	---	16	114	10	43	10
BMS Building	6	847 sq. ft.	67	1	1	5	10	6
BMS Building	7	505 sq. ft.	32	1	1	2	8	3
BMS Building Library	8	847 sq. ft.	44	1	1	5	10	4
BMS Building LAB	9 A	424 sq. ft.	---	1	44	4	52	4
BMS Building LAB	9 B	423sq. ft.	---	1	36	6	58	6
BMS Building	10	847 sq. ft.	58	1	1	5	10	6
BMS Building	11	505 sq. ft.	50	1	1	4	10	3
BMS Building	12	606 sq. ft.	---	1	1	5	10	6
BMS Building	13	894 sq. ft.	54	1	2	6	6	6
Computer Lab	14	894 sq. ft.	52	1	1	6	11	6





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Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches	Tube
BMS Building IT STAFF	---	224 sq. ft.	---	2	15	2	18	3
BMS Building	15	505 sq. ft.	53	1	1	6	11	6
BMS Building	16	847 sq. ft.	30	1	1	6	11	5
BMS Building	17	606 sq. ft.	49	1	1	6	11	6



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### TARE BHAVAN

Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches	Tube
J1	1	800 sq. ft.	52	1	1	5	4	7
J2	2	800 sq. ft.	52	1	1	5	4	7
J3	3	800 sq. ft.	52	1	1	5	4	7
J4	4	800 sq. ft.	52	1	1	5	4	7

### MA CENTRE

Building Name	Classroom No	Sq. Ft.	Benches	Table	Chair	Fans	Switches	Tube
MA Centre	1	230 sq. ft.	20	1	2	2	5	1
MA Centre Dept. Office	2	230 sq. ft.	---	3	9	2	8	1
MA Centre	3	230 sq. ft.	20	1	2	2	5	4
MA Centre RD Dept. Office	4	230 sq. ft.	--	5	6	2	8	1



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## LABORATORIES

Laboratory Name	Sq.ft.	Instrument	Table	Chair	Fans	Switches	Tube
Physics lab 1	720	16	11	6	10	115	12
Physics lab 2	720	12	5	4	10	118	11
Physics lab Dark room	400	12	6	2	4	75	8
Physics lab Msc	400	12	4	2	5	72	6
Physics lab Staff Room Electronic - lab -03	350	---	6	14	5	41	6
Biotech Lab 1	600 sq.ft.	14	1	2	3	38	4
Biotech Lab 2	600 sq.ft.	2	1	2	4	45	6
Biotech Lab 3	900 sq.ft.	4	2	5	7	68	5
Biotech Lab 4	300 sq.ft.	10	4	2	4	27	4
Biotech preparation room	900 sq.ft.	10	2	12	7	101	8
Biotech Lab Staff room	120 sq.ft.	-	3	11	1	12	1
Zoology Lab 1	900 sq.ft.	5	17	7	5	36	9
Zoology Lab 2	405 sq.ft.	3	4	2	4	16	2



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Zoology Lab msc	400 sq.ft.	4	7	2	5	34	7
Zoology Lab research	200 sq.ft.	6	2	13	2	35	7
Zoology Lab Staff Room	200 sq.ft.	2	4	12	3	32	3
Botany Lab 1	720 sq.ft.	3	18	2	8	36	13
Botany Lab 2	720 sq.ft.	17	15	2	10	39	18
Botany Lab Research lab	600 sq.ft.	11	5	10	4	40	9
Botany Lab TY	351 sq.ft.	2	3	1	2	19	5
Chemistry Lab Staff Room	462	---	2	15	2	22	4
Chemistry Lab Preparation room	462	---	2	1	1	25	5
Chemistry HOD Room	48	---	1	5	1	4	2
Chemistry Lab 1	681	---	1	1	1	18	8
Chemistry Lab 2	681 sq.ft.	---	1	1	1	18	10
Chemistry Lab 3	462 sq.ft.	37	1	2	5	15	4
Chemistry Lab 4	462 sq.ft.	39	1	1	5	15	5
Chemistry Research Lab	48 sq. ft.	---	1	6	1	21	2
Chemistry Lab 5	681 sq.ft.	---	1	1	5	55	5
Chemistry Lab 6	681 sq.ft.	25	1	1	6	78	10



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Chemistry Lab Msc 1	462 sq.ft.	---	1	4	3	33	7
Chemistry Lab Msc 2	462 sq.ft.	---	2	1	3	35	7
Chemistry Lab Msc 3	681 sq.ft.	---	1	2	1	15	5
Chemistry Lab Msc 4	681 sq.ft.	---	1	2	1	11	5
Computer lab 1	946 sq.ft.	51	1	74	5	78	6
Computer lab 2	385 sq.ft.	29	1	30	3	44	5
Computer lab 3	847 sq.ft.	42	1	42	4	107	6
Computer lab 4	874 sq.ft.	42	1	45	4	55	4
Computer lab 5	424 sq.ft.	40	1	36	6	67	6
Computer lab 6	423 sq.ft.	36	1	60	5	54	5



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## NEW BUILDING

Building Name	Class Room	Sq.ft.	Benches	Table	Chair	Fans	Switches	Tube
New Building	N 1	768 Sq. Ft.	40	1	25	5	12	5
New Building	N 2	768 Sq. Ft.	30	1	1	5	12	5
New Building	N 3	768 Sq. Ft.	30	1	1	5	12	5
New Building	N 5	768 Sq. Ft.	32	1	1	5	12	5
New Building	N 6	768 Sq. Ft.	30	1	1	5	13	5
New Building	N 7	768 Sq. Ft.	30	1	1	5	12	5
New Building	N 8	768 Sq. Ft.	32	1	1	7	13	5
New Building	N 9	768 Sq. Ft.	59	1	1	5	11	5
New Building	N 10	768 Sq. Ft.	55	1	1	5	11	5
New Building	N 11	768 Sq. Ft.	56	1	1	5	11	5
New Building	N 12	768 Sq. Ft.	55	1	1	5	11	5
New Building	N 13	768 Sq. Ft.	57	1	1	5	11	5
New Building	N 14	768 Sq. Ft.	57	1	1	5	11	5



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New Building	N 15	768 Sq. Ft.	50	1	1	5	11	5
New Building	N 16	768 Sq. Ft.	50	1	1	5	11	1
New Building	N 17	272 Sq. Ft.	8	1	1	1	4	1
New Building	N 18	132 Sq. Ft.	5	1	1	1	4	1
New Building	N 19	132 Sq. Ft.	8	1	1	1	4	1
New Building	N 20	144 Sq. Ft.	8	1	1	1	5	2
New Building	N21	807 Sq.ft.	62	1	1	5	14	5
New Building	N22	800.69 Sq.ft.	60	1	1	5	14	5
New Building	N23	741.51	60	1	1	5	14	5
New Building	N24	741.51	58	1	1	5	14	5
New Building	N25	797.5	56	1	1	5	14	5
New Building	N26	803.88	57	1	1	5	14	5
New Building	N27	797.5	56	1	1	5	14	5
New Building	N28	794.31	55	1	1	5	14	5
New Building	N29	797.5	---	1	40	5	52	5
New Building	N30	549.83	36	1	1	5	4	5
New Building	N31	215.53	30	1	1	2	4	2



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<b>New Building</b>	<b>N32</b>	<b>215.53</b>	<b>16</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>2</b>
<b>New Building</b>	<b>N33</b>	<b>238.8</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>8</b>	





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## Department of Chemistry

# Laboratory Information

### DEPARTMENTAL LABORATORIES

Sr. No.	Laboratory Name / Number	Floor	Area in Sq. Ft.
1	Research Laboratory	Ground	460
2	Undergraduate Lab-1	Ground	1050
3	Undergraduate Lab-2	Ground	1050
4	Instrumentation Lab	1 <sup>st</sup>	1050
5	Postgraduate and Research Lab	1 <sup>st</sup>	1050
6	Audio visual room	1 <sup>st</sup>	460
7	Computer and Research Lab	1 <sup>st</sup>	140
8	Postgraduate Lab-1	2 <sup>nd</sup>	700
9	Analytical Chemistry Lab	2 <sup>nd</sup>	460
10	Physical Chemistry Lab	2 <sup>nd</sup>	460
11	Postgraduate Lab-2	2 <sup>nd</sup>	700



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### DEPARTMENT OF CHEMISTRY

### LIST OF COMPUTERS AND NETWORKING

Sr. No	Name of the Instrument	Number	Laboratory where instrument kept
1	Computers	07	<ul style="list-style-type: none"><li>• First Floor, Computer &amp; Research Lab –03</li><li>• Head of Department cabin – 01</li><li>• HPLC system – 01 (Photo attached in Instrument )</li><li>• UV-Visible Spectrophotometer – 02 (Photo attached in Instrument )</li></ul>
2	Printer	02	First Floor, Computer & Research Lab HP LaserJet 1020 plus HOD Cabin
3	Router	01	First Floor, Computer & Research Lab
4	Internet connection	-	For 4 computers First Floor, Computer & Research Lab-03 Head of Department cabin – 01

### Appliances



**Interactive TV Panel, First Floor**



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**Computer with Printer  
First Floor, Computer and Research Lab**



**AC  
First Floor, Computer and Research Lab**



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**AC – 3 Nos**

**First Floor, Instrumentation Lab 1**



**Refrigerator**

**First Floor, Computer and Research Lab**



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### **LIST OF INSTRUMENTS IN LABORATORIES**

Sr. No	Name of the Instrument	Number	Purpose
1	Vaccume desicator	01	Research
2	Oven	05	Practicals
3	Karl fisher instrument (Autotitrater)	01	Practicals
4	UV-visible spectrophotometer	02	Research
5	HPLC	01	Research and Practicals
6	GC	01	Practicals
7	Mixture Grinder	01	Research and Practicals
8	Sonicator	01	Research and Practicals
9	Digital balance	08	Research and Practicals
10	Microwave	01	Research
11	Colorimeter	06	Practicals
12	Conductometer	11	Practicals
13	Visible spectrophotometer	04	Practicals
14	pH Meter	03	Practicals
15	Potentiometer	17	Practicals
16	Heating mental	15	Practicals
17	DM Plant	02	Practicals
18	Magnetic stirrer	09	Practicals
19	Shaker	01	Practicals
20	Thermostat	01	Practicals
21	UV chamber	02	Research and Practicals
22	Vaccume generator	02	Research and Practicals
23	Autoclave	01	Research



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24	Hydrogen, Nitrogen and Oxygen Gas Cylinder	01	Research
25	Inverter	03	Research and Practicals





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## Department of Chemistry

### INSTRUMENTS

#### 1. Vaccume desiccator



#### 2. Oven





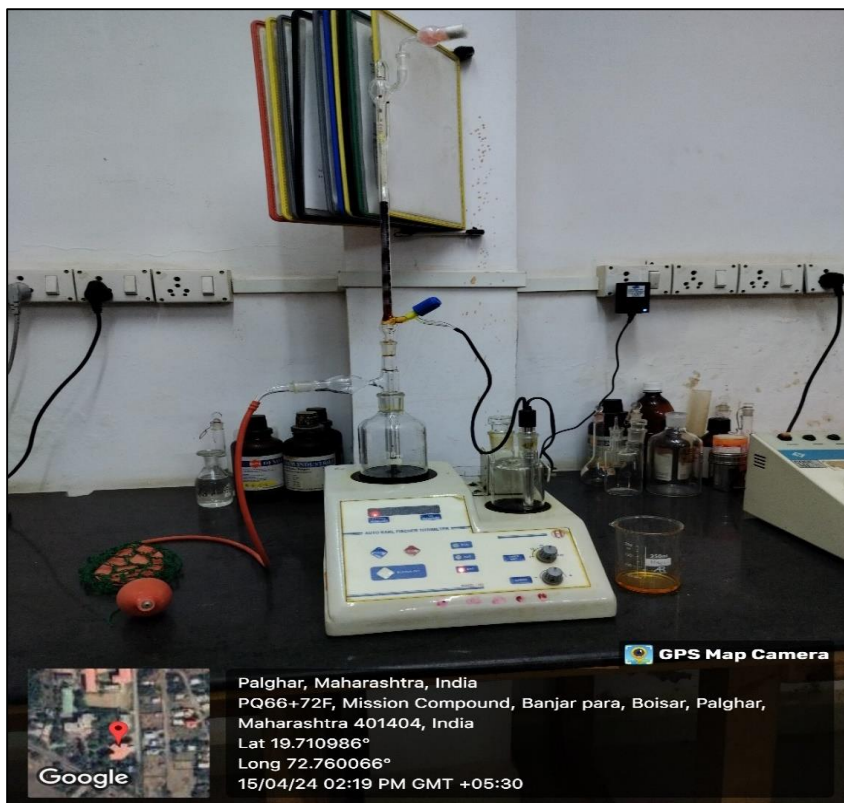
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## 3. Karl Fischer



## 4. UV-Visible Spectrophotometer







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# Sonopant Dandekar Arts, V.S. Apte Commerce & M.H. Mehta Science College, Palghar

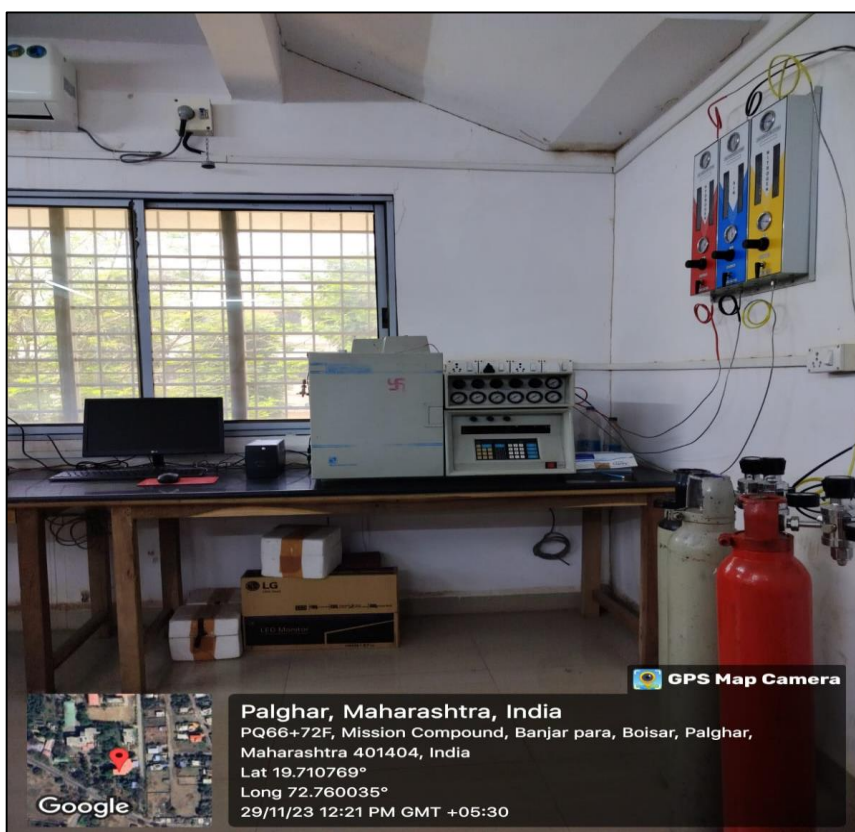
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## 5. High Performance Liquid Chromatography



## 6. Gas Chromatography





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### 7. Mixture Grinder



### 8. Sonicator





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## 9. Digital balance



## 10. Micro-oven







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## 11. Conductometer



## 12. Colorimeter





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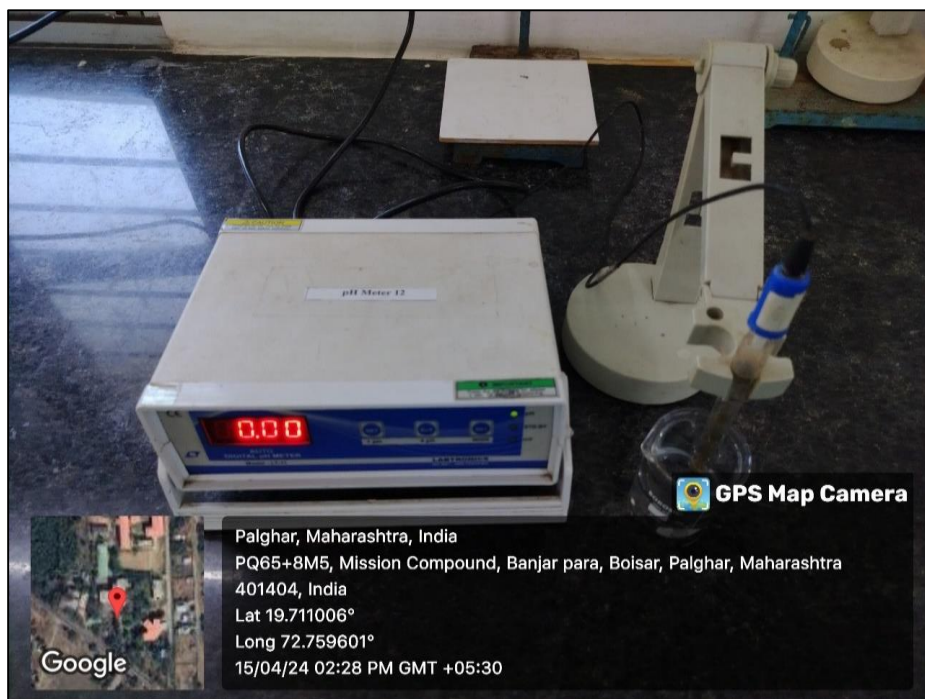
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## 13. Spectrophotometer



## 14. pH Meter







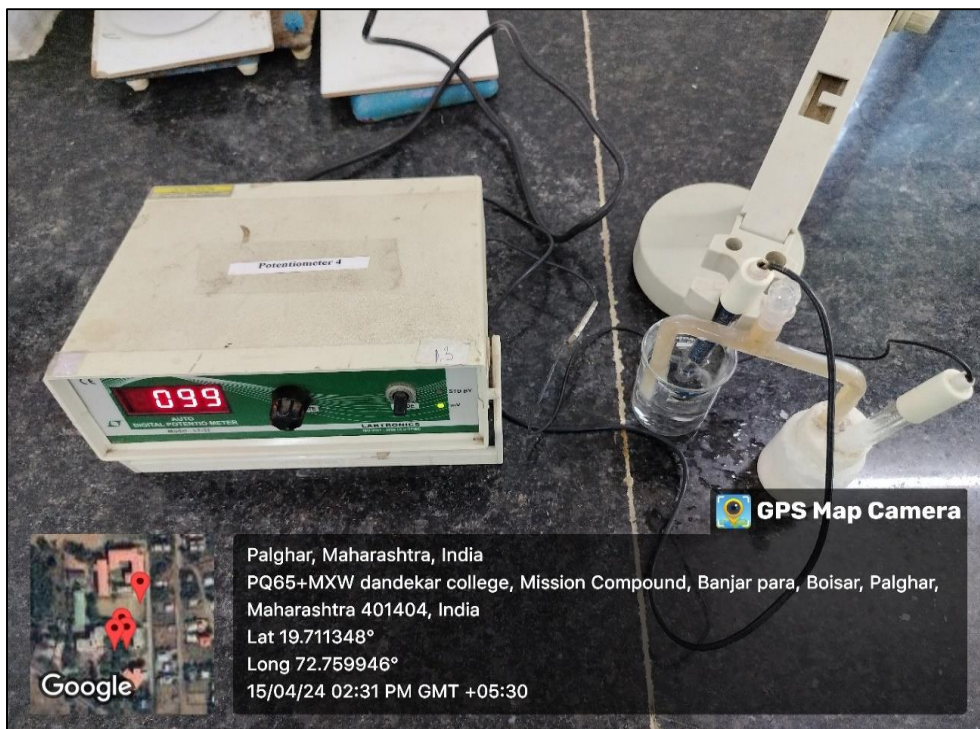
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## 15. Potentiometer



## 16. Heating mental





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## 17. Distillation unit



## 18. Magnetic stirrer







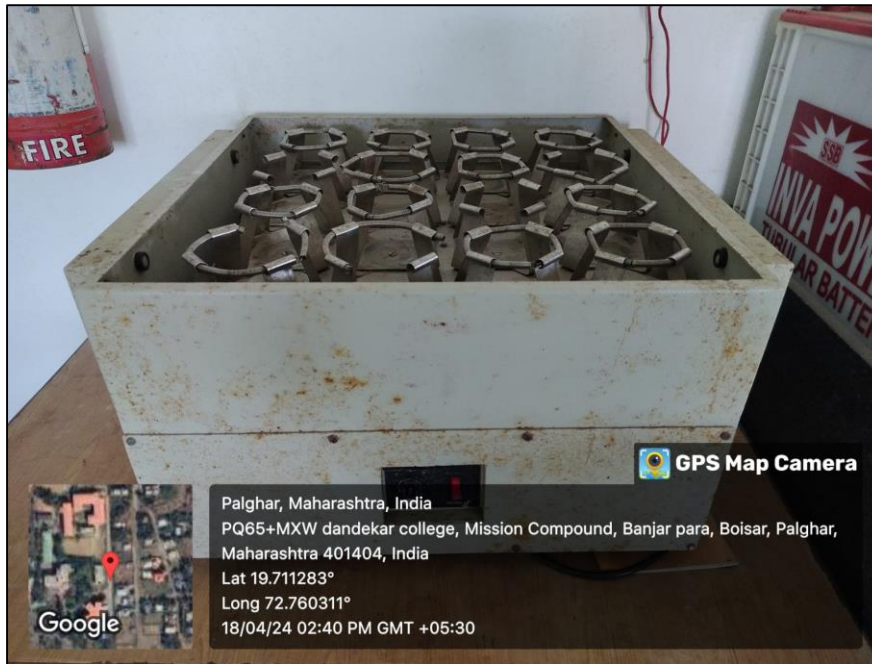
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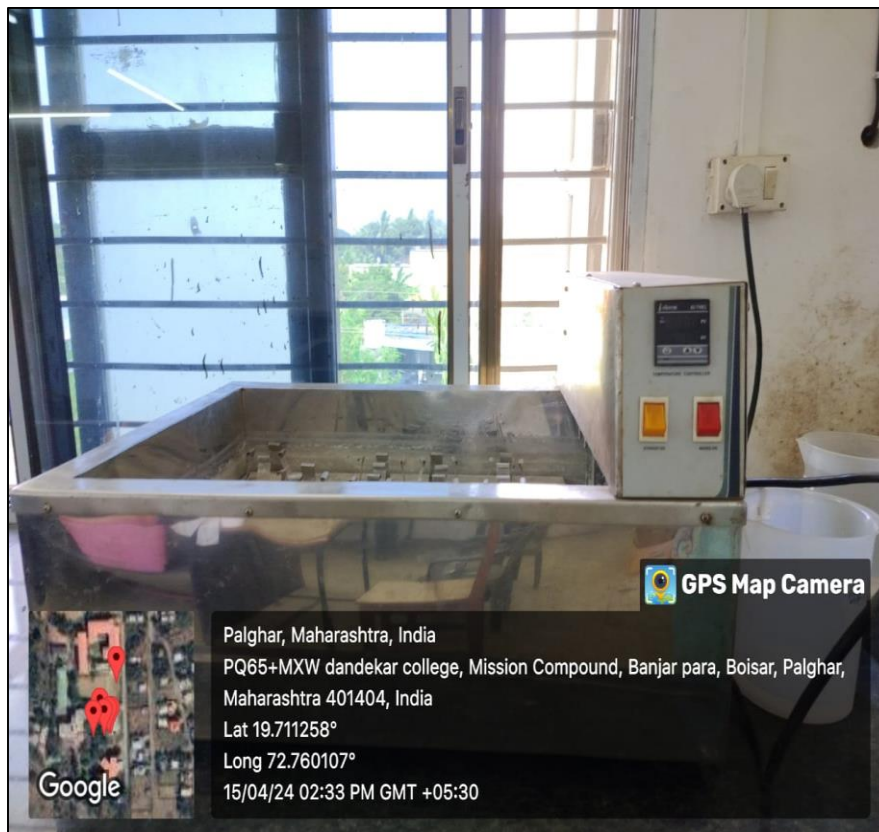
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## 19. Shaker



## 20. Thermostat







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## 21. UV chamber



## 22. Vaccume generator





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## 23. Autoclave



## 24. Nitrogen cylinder





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## Department of Biotechnology

### Department Laboratories information

Sr. No.	Laboratory Name/ Number	Items	No. of Items	Area in sq feet	Purpose
01	Lab 1	Fan	03	600	For U.G. and P.G. Practicals.
		Tubelight	04		
		Bulb	13		
		Plug	14		
		AC Plug	01		
		Autoclave Plug	01		
02	Lab2	Fan	04	600	For U.G. Practicals
		Tubelight	06		
		Bulb	16		
		Plug	14		
		AC Plug	02		
03	Lab3	Fan	04	600	For U.G. Practicals
		Tubelight	04		
		Plug	13		
		AC Plug	01		



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<b>04</b>	Ph.D. research Lab	Fan	03	300	For Research
		Tubelight	02		
		Plug	10		
		AC Plug	01		
<b>05</b>	Lab4	Fan	04	300	For P.G. Practicals.
		Tubelight	04		
		Plug	11		
<b>06</b>	Preparation Lab	Fan	03	300	For Chemical and Media Preparation.
		Tubelight	03		
		Plug	12		
		Autoclave Plug	01		
<b>07</b>	Instrumentation Lab	Fan	02	300	For the Analysis purpose regarding different practicals.
		Tubelight	02		
		Plug	07		
<b>08</b>	Bioinformatics Lab	Fan	04	300	For Bioinformatics Practicals of U.G. and P.G. Students.
		Tubelight	02		
		Plug	16		
		AC Plug	01		



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### List of instruments

Sr. No	Instruments	Quantity.	Applications
1.	Autoclave	04	Used for sterilising requirements for research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
2.	Benchtop Centrifuge	03	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
3.	Colony Counter	01	Used for observation : For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
4.	Colorimeter	04	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
5.	Cooling Centrifuge	01	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
6.	Distillation Plant	01	Used for distilling water : For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
7.	Gel Rocker	01	Used for analytical purpose: For research and regular practicals for SY/TY/MScP-I/MSc-P-II
8.	Incubator	03	Used for observation : For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
9.	Laminar Air Flow	01	Used for aseptic transfers. SY/TY/MScP-I/MSc-P-II and research
10	Magnetic Stirrer	01	Used for mixing of chemicals FY/SY/TY/MScP-I/MSc-P-II and research
11	Medical Microscope	27	Used for observation: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
12	Micro. Turbidity Meter	01	Used for analytical purpose: For research and regular practicals for TY/MScP-I/MSc-P-II and research





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13	Microwave Oven	02	Preparation of Microbial media. For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
14	Orbital Shaker (Incubatory)	01	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
15	Oven	03	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
16	pH Meter	04	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
17	Refrigerator	05	For maintenance of microbial culture and analytical grade chemicals: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
18	Rota Mantle	01	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
19	Rotary Shaker Machine	01	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
20	Tissue Culture Rack	01	Used for sterile work For research and regular practicals for FY/SY/TY/MScP- I/MSc-P-II
21	UV Spectrophotometer Single Beam	01	Used for observation : For research and regular practicals for SY/TY/MScP-I/MSc-P-II
22	UV Transilluminator	01	Used for observation : For research and regular practicals for SY/TY/MScP-I/MSc-P-II Used for demonstration purpose: For FY
23	Viscometer	01	Used for analytical purpose: For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
24	Visible Spectrophotometer	01	Used for observation : For research and regular practicals for SY/TY/MScP-I/MSc-P-II
25	Vortex Mixer	02	Used for analytical purpose:



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			For research and regular practicals for FY/SY/TY/MScP-I/MSc-P-II
<b>26</b>	<b>Water Bath</b>	<b>01</b>	maintaining the optimum temperature. forFY/SY/TY/MScP-I/MSc-P-II and research.
<b>27</b>	<b>Weighing Balance</b>	<b>03</b>	Used for analytical purpose: For research and regular practicals for SY/TY/MScP-I/MSc-P-II and research.



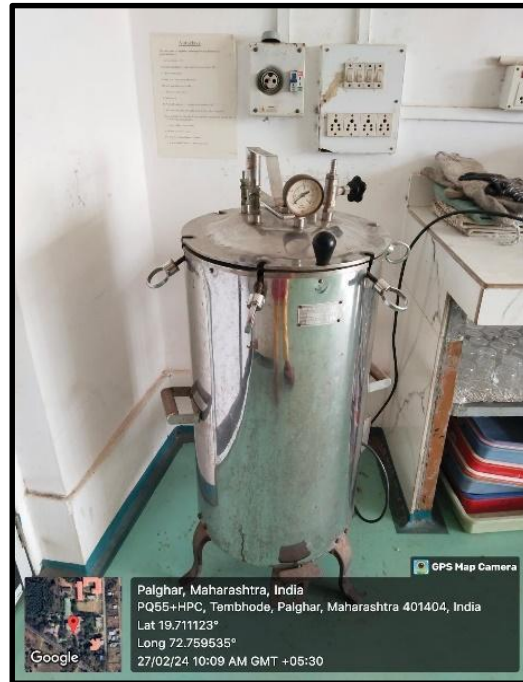
Sonopant Dandekar Shikshan Mandali's

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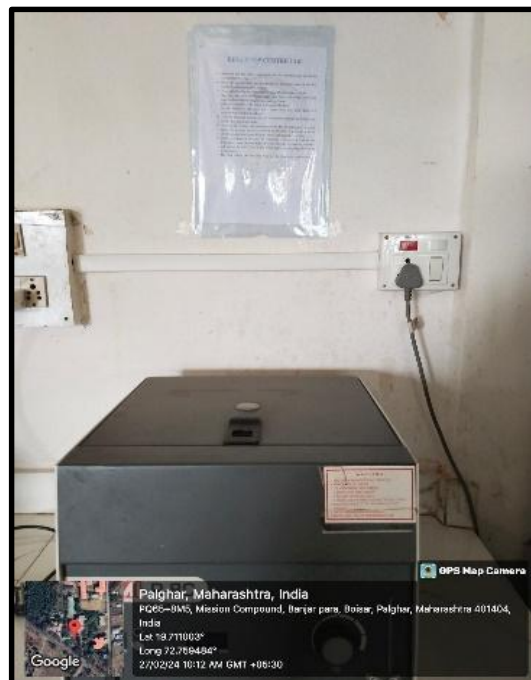
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## 1. Autoclave



## 2. Benchtop Centrifuge







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## 3. Colony Counter



## 4. Colorimeter





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### 5. Cooling Centrifuge



### 6. Distillation Plant





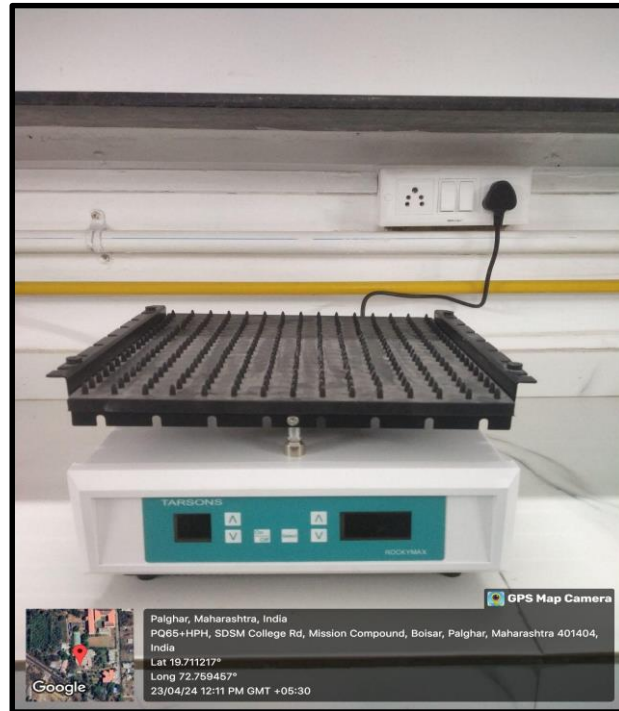
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### 7. Gel Rocker



### 8. Incubator





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## 9. Laminar Air Flow



## 10. Magnetic Stirrer







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## 11. Medical Microscope



## 12. Micro. Turbidity Meter





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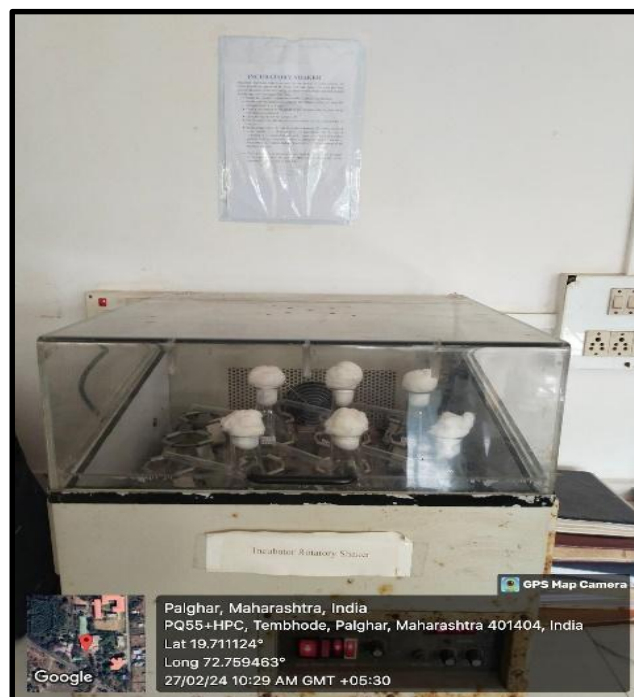
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### 13. Microwave Oven



### 14. Orbital Shaker (Incubatory)





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### 15. Oven



### 16. pH Meter





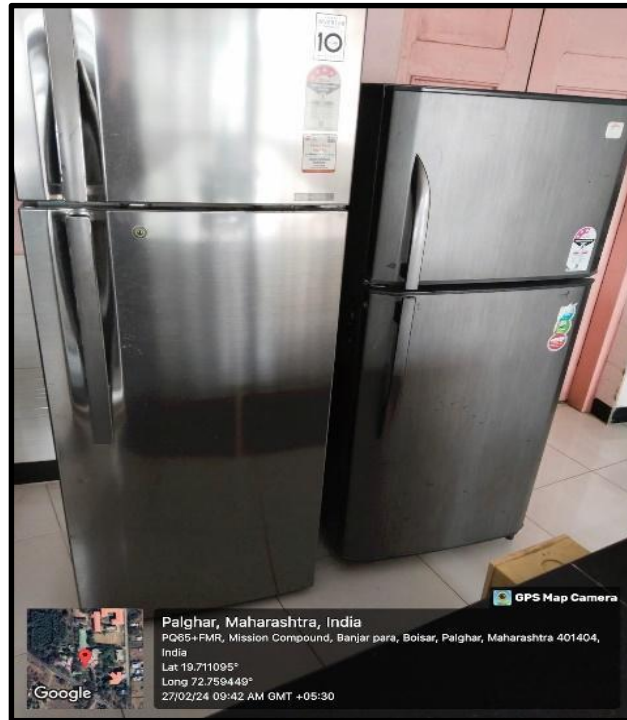
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### 17. Refrigerator



### 18. Rota Mantle







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### 19. Rotary Shaker Machine



### 20. Tissue Culture Rack





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### 21. UV Spectrophotometer Single Beam



### 22. UV Transilluminator





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### 23. Viscometer



### 24. Visible Spectrophotometer





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### 25. Vortex Mixer



### 26. Water Bath







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## 27. Weighing Balance







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### LIST OF CHARTS

S.N	Name of the Chart
1	Golgi Complex
2	Nucleus
3	Mitochondrion
4	Structure of Cilium & Flagellum
5	Mitosis in Plant
6	Lac Operon
7	Cytoplasmic Inheritance
8	Chromosomal Aberration
9	Cell Membrane & Cell Wall
10	Endoplasmic Reticulum
11	Nucleotides & Biosynthesis
12	Prokaryotic & Eukaryotic Cells
13	Electrophoresis



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14	Osmosis Plasmolysis & Diffusion
15	Ribosomes & Lysosomes
16	Crossing Over
17	Recombinant DNA & Cloning
18	Chromosomes
19	Active & Passive Transport
20	Chloroplast
21	Monoclonal Antibodies & Blotting
22	Meiosis in Plants First Division
23	Optical Isomerism & Geometrical Isomerism
24	Protein Synthesis
25	Enzymes
26	Protein Structure
27	Type of Base Substitution mutation Transcription of the Segment shown produces RNA with the Sequence.



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28	Elongation stage of Translation in Prokaryotes
29	Fermented Dairy Product
30	Integral Protein Spanning Both Side
31	Formation of Peptide Bond
32	Protein Synthesis
33	The Structure of Adherens Junction
34	Kappa Particles in Paramecium
35	Lac Operon
36	Tryptophan Operon
37	Immunoglobulin Structure
38	Transposons
39	Gene Transfer- Conjugation
40	Gene Transfer-2- Transduction
41	Gene Transfer-3
42	DNA Replication



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43	Kreb's Cycle
44	Polymerase Chain Reaction ( PCR)
45	Plasma Membrane
46	Blotting Technique for Nucleic Acid
47	Blotting Technique for Protein
48	Complement System
49	Human Endocrine System
50	Human Immunity System
51	Total Count OF Blood
52	Test Tube Baby –in Vitro fertilization
53	Proteomics
54	Plant Tissue Culture
55	An Animal Cell / A Plant Cell
56	Water Analysis for Coliform Bacteria.
57	BT-Cotton



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58	Principles and Applications Of Modern Biotechnology
59	Biofuel
60	Structure of DNA Molecule
61	Bioreactor
62	Animal Cloning
63	Biodiesel – Jatropha Curcas ( Ratan Jyot)
64	Edible Vaccines
65	DNA-Fingerprinting Procedures Overview
66	DNA-Fingerprinting Agarose Electrophoresis Running
67	Enzymes and its Applications
68	Biofuel-Biogas ( Gobar Gas)
69	Antibiotic Sensitivity test
70	ELISA- Enzyme Linked Immunosorbent Assay
71	Acquired Immunity
72	Recessive Epistasis





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73	Vaccination
74	Recessive Epistasis A/B
75	Characteristics of Tuberculosis Bacteria
76	Dominant Epistasis
77	Initiation of Transcription in Eukaryotes
78	E.histolytica- Cell cycle A/B
79	Extra Chromosomal Inheritance in Mirabilis Jalapa
80	Protein Synthesis inhibitors
81	Antibodies
82	Double dominant epistasis
83	Initiation of Translation in Prokaryotes
84	Sulfonamides
85	Antibiotics and their place of Action
86	Morphological, cultural and biochemical characteristics of salmonella



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87	General Structures
88	Mycobacterium Tuberculosis
89	Widal Test and It's Conclusions
90	Aminoacylation of t-RNA
91	Cell wall inhibitors and Their Action
92	Antibodies



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# **DEPARTMENT OF BOTANY**

## **LABORATORY INFORMATION**

Sr. No	Laboratory No.	Laboratory Name	Floor	Area in sq feet	FAN	TUBE
1	26	Main Lab	2 <sup>nd</sup>	720 sq feet	8	13
2	29	MSc Lab	2 <sup>nd</sup>	720 sq feet	10	18
3	30	T.Y.BSc Lab	2 <sup>nd</sup>	351 sq feet	2	5
4	-	Teachers Staff Room	2 <sup>nd</sup>	300 sq feet	2	4
5	-	Research Lab	2 <sup>nd</sup>	300 sq feet	2	5

### **List of Laboratory Instruments**

**Note – All the Instruments are Applicable.**

Sr No	Name of the Instruments	Quantity	Purpose	Class
1	Autoclave Vertical	1	To kill infectious agents and denature proteins (Stem Sterilization)	UG & PG
2	Bacteriological Lab Incubator	1	Drying of slides, Tissue culture, Incubation of anti-body, Paraffin embedding, Incubation of Hydroxyl steroids, Crystallization and Microbiological determination	PG
3	BOD Incubator	1	Determining levels of Organic matter and	PG



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			Nitrogen in waste water samples.	
4	Centrifuge	1	To separate partials suspended in liquid according to particle size and density, viscosity of the medium and rotor speed	UG & PG
5	Conductivity meter	1	Measures the electrical conductivity in a solution	PG
6	Colorimeter	2	Measure the absorbency of light waves	UG & PG
7	Digital Photo electric colorimeter	1	Effectively serve both the chemical and the clinical groups in fields such as Biochemistry, Agriculture, Veterinary, and Dyestuff & Pharmaceutical.	UG & PG
8	Digital weighing balance	2	To measure the weight or mass of an object	UG & PG
9	Digital oven	1	Part drying, Baking, Curing, Sterilizing, Evaporating, Heat treating, Annealing and testing	UG & PG
10	Distillation unit	1	Separating and/or purifying components of a liquid mixture	UG & PG
11	Laminar air flow	1	To create a sterile atmosphere for activities like Plant tissue culture	UG & PG
12	Mixer and Grinder	2	Grinding various ingredients such as grains, lentils, whole spices, nuts and seeds	UG & PG
13	Muffle furnace	2	To heat materials to extremely high temperatures whilst isolating them from fuel and the byproducts of combustion from the heat source	UG & PG
14	pH meter	1	To measure hydrogen ion activity in solutions	UG & PG
15	Round Hot plate	1	Suitable for laboratories, chemicals,	Ph.D.



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			pharmaceuticals, Dyes, Glass plants etc. Particularly useful for Heating inflammable liquids	
16	Rotary Shaker	1	Pathological work for shaking the liquid in Conical flask from 25 to 1000 ml capacity	UG & PG
17	Turbidity meter	1	To measure turbidity. Measuring low level turbidity requires an accurate measurement of the Scattered light in water.	PG
18	Water bath Controller small	1	To incubate samples in water at a constant temperature over a long period of time	UG & PG
19	Water bath controller	1	To incubate samples in water at a constant temperature over a long period of time	UG & PG
20	Simple Microscope	48	It is used to examine minute algae, fungi and biological materials	UG & PG
21	Dissecting Microscope	25	To view three- dimensional objects and larger Specimens	UG & PG





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## Laboratory Instruments

### 1. Autoclave Vertical



### 2. Bacteriological Lab Incubator





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## 3. BOD Incubator



## 4. Centrifuge





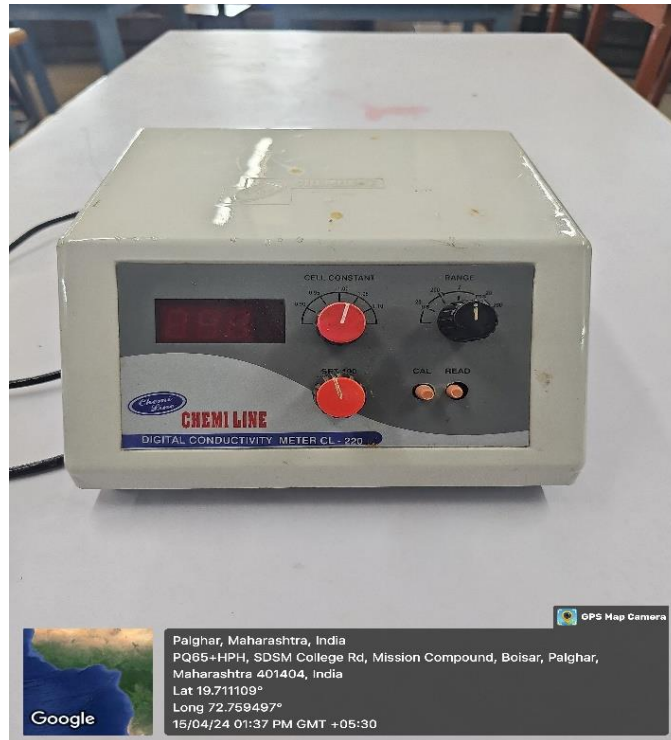
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## 5. Conductivity meter



## 6. Colorimeter







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## 7. Digital Photo electric colorimeter



## 8. Digital weighing balance





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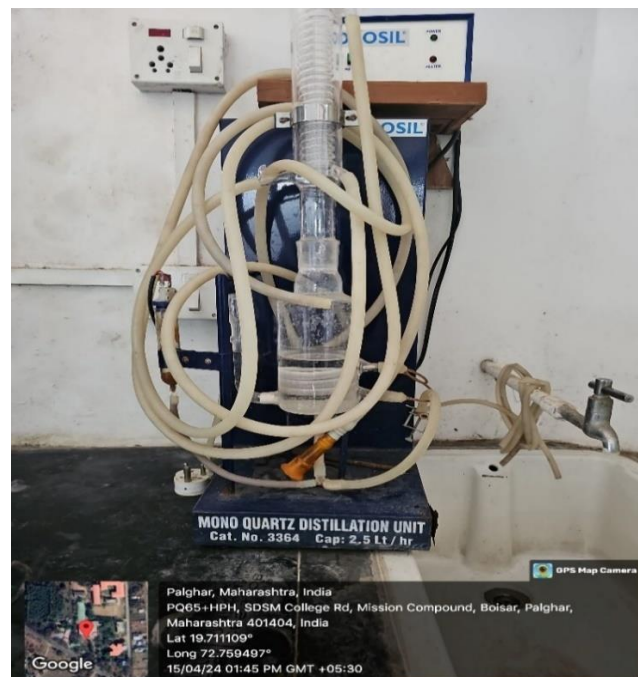
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## 9. Digital oven



## 10. Distillation unit







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## 11. Laminar air flow



## 12. Mixer and Grinder





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## 13. Muffle furnace



## 14. pH meter





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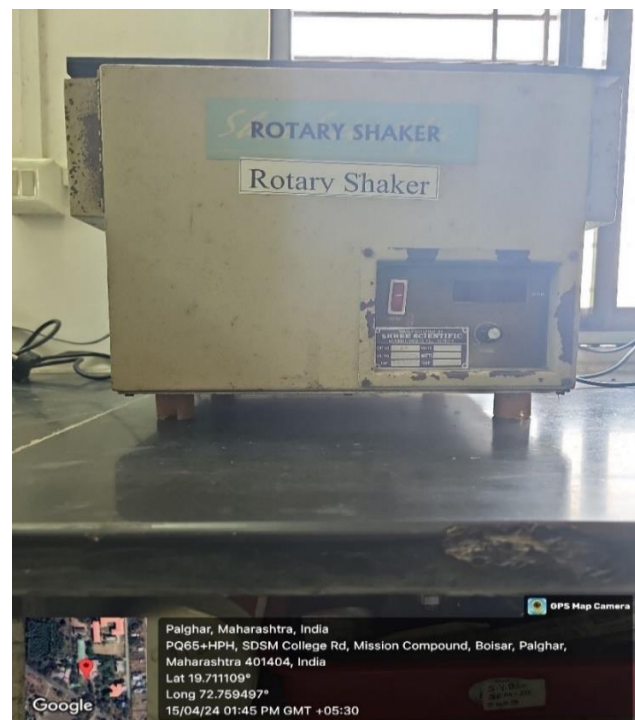
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## 15. Round Hot plate



## 16. Rotary Shaker







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## 17. Turbidity meter



## 18. Water bath Controller small





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### 19. Water bath Controller



### 20. Simple Microscope







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## 21. Dissecting Microscope



## 22. Electronic Microscope





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### Department of Zoology

#### List of Instruments

Sr. No.	Name of the Instrument	Quantity	Use of instrument	Location
1.	Oven	2	oven is used to provides uniform temperature throughout the chamber necessary for annealing, drying and sterilizing	T.Y.B.Sc lab. And M.Sc.lab
2.	Incubator	2	A <b>laboratory incubator</b> is a heated, insulated box used to grow and maintain microbiological or cell cultures. The laboratory incubator maintains optimal temperature, humidity and gaseous content of the atmosphere inside	T.Y.B.Sc lab. And M.Sc.lab
3.	D.W Plant	1	Use to make D.W	T.Y.B.Sc lab.
4.	Autoclave	1	An autoclave that uses steam under pressure to kill harmful bacteria, viruses, fungi, and spores on items that are placed inside a pressure vessel. The items are heated to an appropriate sterilization temperature for a given amount of time.	M.Sc lab.
5.	Binocular Microscope	3	Binocular microscopes are ideal for biological studies, especially microscopy of low-contrast objects, e.g. observation of	T.Y.B.Sc lab. And M.Sc.Lab



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			microorganisms or red blood cells, or blood analysis	
6.	Compound Microscope	57	r microscopes are ideal for biological studies, especially microscopy of low-contrast objects, e.g. observation of microorganisms or red blood cells, or blood analysis	T.Y.B.Sc lab.
7.	Dissecting Microscope	26	Dissecting Microscope used to study external features on an object or to examine structures not easily mounted onto flat slides.	T.Y.B.Sc lab.
8.	Water Bath	1	A water bath is used to incubate samples in water at a constant temperature over a long period of time	B.Sc lab.
9.	Centrifuge Machine	1	The centrifuge is a commonly used uses centrifugal force to separate substances in liquid or solid media according to particle size and density differences.	B.Sc lab.
10.	Digital Balance	1	Instrument used in laboratory settings for measuring the mass of substances. It is designed to provide accurate and reliable measurements	B.Sc lab.and M.Sc.Lab
11.	Electrophoresis Power Pack	1	Power supplies for electrophoresis are used to create the electrical current to power DNA/RNA separations, PAGE electrophoresis and transferring to membrane.	B.Sc lab.
12.	Lux Meter	1	Lux meters are used for measuring brightness in lux, fc or cd/m <sup>2</sup> .	B.Sc lab.



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13.	Turbidity Meter	1	Turbidity meters are a popular tool for measuring the turbidity of liquid samples. They are an essential water quality-indicating tool.	B.Sc lab.
14.	Colorimeter	3	Colorimeter used to measure the concentration of a chemical in a solution if the chemical imparts a characteristic colour to the solution.	B.Sc lab.
15.	PH Meter	3	pH meter is an instrument used to measure hydrogen ion activity in solutions - in other words, this instrument measures acidity/alkalinity of a solution.	B.Sc lab. M.Sc.Lab
16.	Conductivity Meter	1	Conductivity meter allows us to measure the level of conductivity in solutions.	B.Sc lab.and M.Sc.Lab
17.	Sound Level Meter	5	to measure sound levels in a standardized way. It responds to sound in approximately the same way as the human ear and gives objective, reproducible measurements of sound pressure levels.	B.Sc lab.
18.	Hand Refractometer	11	refractometers are used to measure a variety of substances, from the concentration of sugar in grape juice to the purity of solvents,	B.Sc lab.
19.	Lactometer	4	lactometer is an instrument that is used to check for the purity of milk by measuring its density.	B.Sc lab.



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20.	Blood Pressure Apparatus	1	Used only for demonstrative practical for measurement of	B.Sc lab.
21.	Stethoscope	1	listening to internal sounds of an animal or human body	B.Sc lab.
22.	Electrophoresis Horz / Vert	2	used for DNA detection and separation, and molecular testing in the nucleic acid analysis, purification and preparation experiment.	B.Sc lab.
23.	LED	10	Artificial light use for microscope and can be replace.	B.Sc lab.
24.	Haemocytometer	14	haemocytometer (or haemocytometer) is a counting-chamber device originally designed and usually used for counting blood cells.	B.Sc lab.
25.	Micropipette	3	A micropipette is a common laboratory instrument used to measure small amounts of liquids with a volume range between 1 and 1000 $\mu$ l.	B.Sc lab.
26.	Thermometer	4	A thermometer is a common laboratory instrument used to measure temperature.	B.Sc lab.
27.	Sahli's Haemometer	12	Sahli's haemoglobinometer is used to determine haemoglobin content in blood samples	B.Sc lab.
28.	Microtome Machine	1	A microtome is a tool used to cut extremely thin sections of material for microscopic examination.	B.Sc lab.
29.	Printer	2	To print document and study material	B.Sc lab
30.	Magnetic Stirrer	1	is used to make a stir bar, immerse in a liquid, quickly spin, or stirring or mixing a solution	M.Sc lab.





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## Laboratory Instruments

### 1. Oven



### 2. Incubator





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## 3. D.W Plant



## 4. Autoclave





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## 5. Binocular Microscope



## 6. Compound Microscope





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## 7. Dissecting Microscope



## 8. Water Bath







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## 9. Centrifuge Machine



## 10. Digital Balance







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## 11. Electrophoresis Power Pack



## 12. Lux Meter





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## 13. Turbidity Meter



## 14. Colorimeter





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## 15. PH Meter



## 16. Conductivity Meter





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## 17.Sound Level Meter



## 18.Hand Refractometer





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## 19. Lactometer



## 20. Sphygmomanometer







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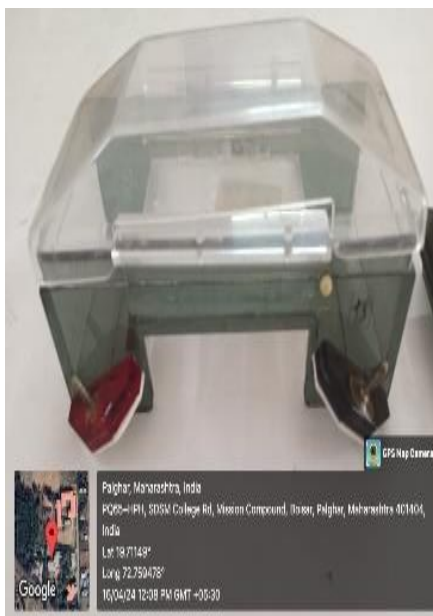
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## 21. Stethoscope



## 22. Electrophoresis Horz / Vert





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## 23. Microscope LED



## 24. Haemocytometer





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### 25. Micropipette



### 26. Thermometer





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## 27.Sahli's Haemometer



## 28.Microtome Machine





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### 29. Magnetic Stirrer



Fan and tube light in Zoology laboratories		
Sr. No.	Device	Quantity
1.	Tube light	30
2.	Fan	20





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### Computers

Windows edition

Windows 7 Professional N

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Service Pack 1

System

Rating: System rating is not available

Processor: Intel(R) Pentium(R) Dual CPU E2140 @ 1.60GHz 1.60 GHz

Installed memory (RAM): 2.00 GB

System type: 32-bit Operating System

Pen and Touch No Pen or Touch Input is available for this Display

Computer name, domain, and workgroup settings

Computer name zoology

Full computer name zoology

Computer description:

Workgroup: WORKGROUP

Windows activation

Windows is activated

Product ID: 55041-011-2195846-86846





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### Printer No.1 – HP LASERJET 1020 Plus. Specifications -

Sub brand LaserJet

Print speed black (ISO, A4)

Normal: Up to 14 ppm Speed  
specification per industry standard  
testing methods

Print speed color (ISO, A4)

Speed specification per industry  
standard testing methods

Print quality black (best)

Black: Up to 600 x 600 dpi (1200  
dpi effective output) Color:

Duty cycle (monthly, A4)

Up to 5000 pages Duty cycle is  
defined as the maximum number of  
pages per month of imaged output.

This value provides a comparison of  
product robustness in relation to  
other HP LaserJet or HP Color  
LaserJet devices, and enables  
appropriate deployment of printers  
and MFPs to satisfy the demands of  
connected individuals or groups.

Display –None





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**Printer No.2 – HP  
LASERJET M 1136 MFP**  
Print Copy Scan Printer.





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## DEPARTMENT OF ZOOLOGY LIST OF CHARTS

Sr. No.	Name of chart
1	Earthworm Digestive System
2	Earthworm Anatomy System
3	Earthworm Excretory System
4	Earthworm External System
5	Plasmodium (A)
6	Vivax – Life cycle (B)
7	Paramoecium Reproduction
8	Pathogenic Protozoa ( 2 no's ) (NO.1,No.2)
9	Cockroach – Male organ
10	Cockroach – Female Organ
11	Lac Insect
12	Cockroach Digestive System
13	Larvae – Invertebrate
14	Prawn Appendages
15	Sepia Alimentary canal.
16	Development of Chick Gastrulation
17	Development 72 hours embryo
18	Development of 48/56 hours embryo
19	Placenta Types- Histological structure
20	Placenta Types- Distribution of villi
21	Types of eggs & Cleavages
22	Gametogenesis
23	Chick embryo 20/30 hrs
24	Mitosis in Animals
25	Meiosis in Animal ( I st Division )
26	Microscope
27	Animal cell Ultra structure
28	D.N.A. structure & Replication
29	Chromosome
30	DNA Transcription & Translation factors
31	Immunoglobulin structure
32	DNA Understanding
33	RNA Types – Transcription & Translation
34	RNA Structure
35	Cell membrane



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36	Endoplasmic reticulum
37	Mitochondria
38	Frog Arterial system
39	Frog Vertebra
40	Frog V.S. of Heart
41	Frog Limbs bones
42	Frog Nervous system
43	Frog Life History
44	Frog Skeleton
45	Frog Male Reproductive system
46	Frog Female Reproductive system
47	Frog Testis & Ovary
48	Frog Respiratory system
49	Frog Brain
50	Frog Eye and Ear
51	Frog Urinogenital system
52	Frog Development early
53	Frog Development & Metamorphosis
54	Frog Liver & Pancreas
55	Pigeon Arterial system
56	Pigeon Venous system
57	Types of Beaks in Birds
58	Pigeon Brain
59	Pigeon Digestive System
60	Types of Feather & development
61	Pigeon Heart
62	Scoliodon Digestive system
63	Scoliodon Brain
64	Scoliodon Heart
65	Scoliodon Skeleton
66	Shark cranial nerves
67	Shark Urinogenital system
68	Scoliodon-Afferent & Efferent vessels
69	Types of Fishes (New)
70	Scoliodon venous system
71	Rat – Arterial system
72	Rat – Venous system
73	Mammalian Ear
74	Human Heart
75	Human Ear
76	Development of hair & V.S. of Skin
77	Human Brain ( New )





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78	Human Skeleton
79	Rabbit Brain
80	Rabbit Testis & Ovary
81	Tooth
82	Filariasis ( Chart no 116 ) New
83	Rabbit – Stomach and intestine
84	Rabbit – Liver and Pancreas
85	Rabbit – Kidney
86	Human nephron ( kidney)
87	Evolution of Elephant
88	Evolution of Horse
89	Canal system in sponges
90	Water vascular system
91	Reptiles heart
92	Venous system of calotes ( Lizard)
93	Arterial system of calotes ( Lizard )
94	Snake Poisonous & Non Poisonous
95	Vertebra Pectoral girdle
96	Heart comparative system (NO.1, No.2)
97	Vertebra Pelvic girdle
98	Evolution – Aortic Arches
99	Comparative study of Brain(NO.1, No.2)
100	Water Cycle
101	Pond Ecosystem
102	Terrestrial & Marine Ecosystems
103	Amphioxus External features
104	Ascaris lumbricoides
105	Taenia Solium
106	Tuberculosis
107	Typhoid
108	Filariasis
109	Leprosy
110	Electrophoreses
111	Cow Digestive System ( Ruminant stomach)
112	Human male Reproductive System
113	Human female Reproductive System
114	Datura (Solanaceae)
115	Human Digestive System
116	Human Menstrual Cycle
117	Microscope



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118	Mitosis in Plant
119	Meiosis in Plants
120	Malvaceae (Hibiscus rosasinesis)
121	Stomata
122	Krebs Cycle
123	C4 & CAM Cycle
124	Glycolysis
125	Root : Dicot
126	Root : Monocot
127	Stem : Dicot
128	Stem : Monocot
129	V.S of Ovule
130	Human Excretory System
131	Human Nervous System
132	The Endocrine System