

GOVERNMENT SCIENCE COLLEGE,

Class: 2018-19

Semester: _____

Division: _____

Batch No: _____

Date of Practicals taken

Roll No.	Name of the Student	Group/ Subject	Date of Practicals taken													
			09/06/18	10/07/18	11/07/18	21/07/18	13/07/18	16/07/18	14/07/18	18/07/18	19/07/18	20/07/18	21/07/18	23/07/18		
1	Boradhira Koupali M.	T.Y.B.Sc. Micro	R	R	R	R	R	R	R	R	R	R	R	R	R	R
2	Chaudhari Hemangini K.	11	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR
3	Chaudhari Kaniishma R.	11	KP	KP	KP	KP	KP	KP	KP	KP	KP	KP	KP	KP	KP	KP
4	Chaudhari Pratibha D.	11	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr	Paitr
5	Chaudhari Ravina M.	11	Panik	Panik	Panik	Panik	Panik	Panik	Panik	Panik	Panik	Panik	Panik	Panik	Panik	Panik
6	11 Ruffeshkumar B.	11	Rh	Rh	Rh	Rh	Rh	Rh	Rh	Rh	Rh	Rh	Rh	Rh	Rh	Rh
7	11 Sapnaben a.	11	Sapna	Sapna	A	Sapna	Sapna	Sapna	Sapna	Sapna	Sapna	Sapna	Sapna	Sapna	Sapna	Sapna
8	11 Shivamiben H.	11	She	She	She	She	She	She	She	She	She	She	She	She	She	She
9	11 Shruti D.	11	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu
10	11 Snehal Kumari A.	11	Sne	Sne	Sne	Sne	Sne	Sne	Sne	A	A	Jen	Sne	Sne	Sne	Sne
11	11 Tejasvini A.	11	TAC	TAC	TAC	TAC	TAC	TAC	TAC	TAC	TAC	TAC	TAC	TAC	TAC	TAC
12	11 Trushiti H.	11	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
13	Ganmit Rozina V.	11	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm	Ganm
14	Hamsabai Siddikahmed R.	11	HSM	HSM	HSM	HSM	HSM	HSM	HSM	HSM	HSM	HSM	HSM	A	HSM	HSM
15	Joshi Rijaben A.	11	RJB	RJB	RJB	RJB	RJB	RJB	RJB	RJB	RJB	RJB	RJB	RJB	RJB	RJB
16	Kadiwala Sumabany I.	11	Semu	Semu	Semu	Semu	Semu	Semu	Semu	Semu	Semu	Semu	Semu	Semu	Semu	Semu
17	Karac Zakariya Yamus	11	A	ZK	ZK	ZK	ZK	ZK	ZK	ZK	ZK	ZK	ZK	ZK	ZK	ZK
18	Kathorwala Usama Y.	11	UY	A	UY	UY	UY	UY	UY	UY	UY	UY	UY	UY	UY	UY
19	Maisuriya Rimal C.	11	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
20	Monyu Shivani S.	11	SSM	SSM	SSM	SSM	SSM	SSM	SSM	SSM	SSM	SSM	SSM	SSM	SSM	SSM
21	Patel Jinal I.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
22	Patel Kankaben D.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
23	Patel Khusbu L.	11	Pate	Pate	Pate	Pate	A	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
24	Patel Khusbu R.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
25	Patel Kinjal B.	11	Pate	A	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
26	Patel Maheshwari D.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
27	Patel Mitul R.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	A
28	Patel Priya N.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
29	Patel Shikhi R.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
30	Patel Vandana M.	11	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
31	Patel Sneha S.	11	Pate	Pate	Pate	Pate	Pate	A	Pate	Pate	Pate	Pate	Pate	Pate	Pate	Pate
32	Rama Bhavisha M.	11	Boru	Boru	Boru	Boru	Boru	Boru	Boru	Boru	Boru	Boru	Boru	Boru	Boru	Boru
33	Rathod Jayshri K.	11	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath	J.Rath
34	Shah Pravi R.	11	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS
35	Surve Vandana R.	11	Surve	Surve	Surve	Surve	Surve	Surve	Surve	Surve	Surve	Surve	Surve	Surve	Surve	Surve
36	Vamsiya Himani H.	11	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani
37	Vasava Sushma C.	11	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava	Vasava
38	Viramani Vibhisha H.	11	Seva	Seva	Seva	A	Seva	Seva	Seva	Seva	Seva	Seva	Seva	Seva	Seva	Seva
39	Atadarsiya Kejal M.	S.Y.B.Sc. Micro	A	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	A	AK	AK
40	Chaudhari Animesh V.	11	Ami	Ami	Ami	Ami	Ami	Ami	Ami	Ami	Ami	Ami	Ami	Ami	Ami	Ami

Aim or Details of the Practical / Exercise performed on the said date

Sign. of Teacher/Lab In-charge

(Circular signatures of teachers/lab in-charge)

GOVERNMENT SCIENCE COLLEGE,

Class: _____ Semester: _____ Division: _____

Batch No: _____

Date of Practicals taken

Roll No.	Name of the Student	Group/ Subject	Date of Practicals taken													
			09/7/18	10/7/18	11/7/18	12/07/18	13/7/18	16/7/18	17/7/18	18/7/18	19/7/18	20/7/18	21/7/18	23/7/18		
41	Chaudhari Amujali R.	S.Y. B.Sc. Micro	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
42	Asmita A.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
43	Hanna N.	11	Humo	Humo	Humo	Humo	Humo	Humo	A	Humo	A	Humo	Humo	Humo	Humo	A
44	Koushik D.	11	Koush	Koush	Koush	Koush	Koush	Koush	Koush	Koush	Koush	Koush	A	A	Koush	Koush
45	khulboo S.	11	Reel	Reel	A	Reel	Reel	Reel	Reel	Reel	Reel	Reel	Reel	Reel	Reel	Reel
46	Krupa M.	11	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc	Kruc
47	Mayur S.	11	M	M	M	M	M	M	M	M	M	M	M	M	M	M
48	Meghana A.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
49	Mimaxi D.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
50	Mishrouta R.	11	M	M	M	M	M	M	M	M	M	M	M	M	M	M
51	Pradgati C.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
52	Poothiksha D.	11	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha
53	Poivyanka N.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
54	Poivyanka V.	11	Pha	Pha	A	Pha	A	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha
55	Sneha K.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
56	Snehajali J.	11	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
57	Touptika B.	11	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
58	Tushar K.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha
59	Krutika A.	11	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
60	Dobariya Abhishek V.	11	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
61	Gamit Nisha J.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha
62	Sanjama A.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
63	Sonal D.	11	SPY	SPY	A	SPY	SPY	SPY	SPY	SPY	SPY	SPY	SPY	SPY	SPY	SPY
64	Tejashvini A.	11	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha
65	Gandhi Shivani S.	11	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
66	Kesava Digvijaysinh	11	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
67	Khera Paiti M.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
68	Tamvi R.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
69	Kosade Apexa H.	11	A.H.K	A.H.K	A.H.K	A.H.K	A.H.K	A.H.K	A.H.K	A.H.K	A	A.H.K	A.H.K	A.H.K	A.H.K	A.H.K
70	Bhumika H.	11	Pha	Pha	Pha	A	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
71	Mahida Purvashi D.	11	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
72	Mangrula Nilam N.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha
73	Mangrula Shivani V.	11	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
74	Mose Zeel M.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
75	Patel Bhoomika A.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha
76	Bhakti M.	11	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
77	Dimkal N.	11	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
78	Poivyanshu S.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha
79	Sandhyu B.	11	Pha	Pha	A	Pha	Pha	Pha	Pha	Pha	Pha	Pha	A	Pha	Pha	Pha
80	Uuvi G.	11	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha	Pha

Aim or Details of the Practical / Exercise performed on the said date

Sign. of Teacher/Lab In-charge

VANKAL TA. MANGROL DIST. SURAT

Roll Call Register for the Practicals of the 1st / 2nd Term Month _____ Year _____

Date of Practicals taken																									of extra practicals attended	Total no. of practicals	Whether Journal certified for the term/ year	Remarks					
24/7/18	25/7/18	26/7/18	27/7/18	28/7/18	30/7/18	31/7/18	1/08/18	2/08/18	3/08/18	4/08/18	5/08/18	7/08/18	13	14	15	16	17	18	19	20	21	22	23	24					25				
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

GOVERNMENT SCIENCE COLLEGE,

Class: _____

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Date of Practicals taken

Roll No.	Name of the Student	Group/ Subject	9/7/18	10/7/18	11/7/18	12/7/18	13/7/18	16/7/18	17/7/18	18/7/18	19/7/18	20/7/18	21/7/18	23/7/18
			1	2	3	4	5	6	7	8	9	10	11	12
81	Pathem Rashmi I.	S.Y. B.Sc. Micro	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass	Pass	Pass
82	Sathavara Riddhi P.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
83	Solanki Shradha N.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
84	Taili Payal B.	"	Pass	A	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
85	UPadhayan Poojarmad G.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
86	Nasava Ankita G.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
87	" Devika V.	"	Pass	Pass	Pass	Pass	A	Pass	Pass	Pass	Pass	Pass	Pass	Pass
88	" Rashmita J.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A
89	" Sejal B.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
90	" Yatin F.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
91	Chaudhari Bhumika J.	F.Y. B.Sc. Micro	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass
92	" Dipalkumari J.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass	A
93	" Dixita R.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass	Pass	Pass
94	" Hetavi J.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
95	" Hiral R.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
96	" Jeenal G.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
97	" Jinal H.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
98	" Kamini V.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A
99	" Maheshvari J.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
100	" Pathik M.	"	Pass	Pass	Pass	A	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
101	" Pinal G.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
102	" Poojaben D.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass	Pass	Pass
103	" Rashmi N.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
104	" Sagun N.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass	Pass	A
105	" Shubham S.	"	Pass	Pass	Pass	A	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass
106	" Smital S.	"	Pass	Pass	Pass	Pass	Pass	A	Pass	Pass	Pass	Pass	Pass	Pass
107	" Snehal A.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
108	" Twinkal P.	"	Pass	Pass	Pass	A	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
109	" Vishakha R.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A	Pass	Pass	Pass
110	" Zinal R.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
111	" Mehul R.	"	Pass	A	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
112	" Nupur D.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
113	Gomit Binitika M.	"	Pass	Pass	Pass	A	Pass	Pass	Pass	Pass	A	Pass	Pass	A
114	" Jemini S.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
115	" Mahima D.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	A
116	" Maitoi R.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
117	" Sejal N.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
118	" Snehal N.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
119	" Suobhi S.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
120	Kansara Deep K.	"	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Aim or Details of the Practical / Exercise performed on the said date

Sign. of Teacher/Lab In-charge

Government Science College, Vankal

Short term Course: Analytical Instruments in Microbiology Lab

Course Code: STCMB01

Duration: 30 hours (1 hours per lecture)

Syllabus covered

Day	Module	Topic	Hours
1	Module 1: Introduction to Analytical Instruments in Microbiology	Overview of analytical techniques in microbiology	1
2	Module 1: Introduction to Analytical Instruments in Microbiology	Importance and applications of analytical instruments	1
3	Module 2: Spectroscopy	Principles of spectroscopy	1
4	Module 2: Spectroscopy	UV-Vis spectroscopy	1
5	Module 2: Spectroscopy	Infrared (IR) spectroscopy	1
6	Module 2: Spectroscopy	Fluorescence spectroscopy	1
7	Module 2: Spectroscopy	Applications in microbiology (e.g., detection of biomolecules, quantification of microbial growth)	1
8	Module 2: Spectroscopy	Hands-on session: Operating a UV-Vis spectrophotometer	1
9	Module 3: Chromatography	Principles of chromatography	1
10	Module 3: Chromatography	High-Performance Liquid Chromatography (HPLC)	1
11	Module 3: Chromatography	Gas Chromatography (GC)	1
12	Module 3: Chromatography	Thin Layer Chromatography (TLC)	1
13	Module 3: Chromatography	Applications in microbiology (e.g., analysis of microbial metabolites)	1
14	Module 3: Chromatography	Hands-on session: Performing TLC analysis	1
15	Module 4: Electrophoresis	Principles of electrophoresis	1
16	Module 4: Electrophoresis	Gel electrophoresis	1
17	Module 4: Electrophoresis	Capillary electrophoresis	1
18	Module 4: Electrophoresis	Applications in microbiology (e.g., DNA, RNA, and protein analysis)	1
19	Module 4: Electrophoresis	Hands-on session: Running and analyzing gel electrophoresis	1
20	Module 5: Centrifugation	Principles of centrifugation	1
21	Module 5: Centrifugation	Differential centrifugation	1

Day	Module	Topic	Hours
22	Module 5: Centrifugation	Density gradient centrifugation	1
23	Module 5: Centrifugation	Ultracentrifugation	1
24	Module 5: Centrifugation	Applications in microbiology (e.g., cell fractionation, isolation of subcellular components)	1
25	Module 5: Centrifugation	Hands-on session: Using a centrifuge for cell separation	1
26	Module 6: Microscopy	Principles of microscopy	1
27	Module 6: Microscopy	Light microscopy	1
28	Module 6: Microscopy	Phase contrast microscopy	1
29	Module 6: Microscopy	Fluorescence microscopy	1
30	Module 6: Microscopy	Hands-on session: Using light microscopes	1

Government Science College, Vankal

Short term Course: Analytical Instruments in Microbiology Lab

Course Code: STCMB01

Duration: 30 hours (1 hours per lecture)

Time Table

Day	Module	Topic	Hours
1	Module 1: Introduction to Analytical Instruments in Microbiology	Overview of analytical techniques in microbiology	1
2	Module 1: Introduction to Analytical Instruments in Microbiology	Importance and applications of analytical instruments	1
3	Module 2: Spectroscopy	Principles of spectroscopy	1
4	Module 2: Spectroscopy	UV-Vis spectroscopy	1
5	Module 2: Spectroscopy	Infrared (IR) spectroscopy	1
6	Module 2: Spectroscopy	Fluorescence spectroscopy	1
7	Module 2: Spectroscopy	Applications in microbiology (e.g., detection of biomolecules, quantification of microbial growth)	1
8	Module 2: Spectroscopy	Hands-on session: Operating a UV-Vis spectrophotometer	1
9	Module 3: Chromatography	Principles of chromatography	1
10	Module 3: Chromatography	High-Performance Liquid Chromatography (HPLC)	1
11	Module 3: Chromatography	Gas Chromatography (GC)	1
12	Module 3: Chromatography	Thin Layer Chromatography (TLC)	1
13	Module 3: Chromatography	Applications in microbiology (e.g., analysis of microbial metabolites)	1
14	Module 3: Chromatography	Hands-on session: Performing TLC analysis	1
15	Module 4: Electrophoresis	Principles of electrophoresis	1
16	Module 4: Electrophoresis	Gel electrophoresis	1
17	Module 4: Electrophoresis	Capillary electrophoresis	1
18	Module 4: Electrophoresis	Applications in microbiology (e.g., DNA, RNA, and protein analysis)	1
19	Module 4: Electrophoresis	Hands-on session: Running and analyzing gel electrophoresis	1
20	Module 5: Centrifugation	Principles of centrifugation	1
21	Module 5: Centrifugation	Differential centrifugation	1

Day	Module	Topic	Hours
22	Module 5: Centrifugation	Density gradient centrifugation	1
23	Module 5: Centrifugation	Ultracentrifugation	1
24	Module 5: Centrifugation	Applications in microbiology (e.g., cell fractionation, isolation of subcellular components)	1
25	Module 5: Centrifugation	Hands-on session: Using a centrifuge for cell separation	1
26	Module 6: Microscopy	Principles of microscopy	1
27	Module 6: Microscopy	Light microscopy	1
28	Module 6: Microscopy	Phase contrast microscopy	1
29	Module 6: Microscopy	Fluorescence microscopy	1
30	Module 6: Microscopy	Hands-on session: Using light microscopes	1



सत्यमेव जयते

Government of Gujarat

GOVERNMENT SCIENCE COLLEGE, VANKAL

DEPARTMENT OF MICROBIOLOGY



Sr. No. SCTMB01/2018-19/20

Date: 20/08/2018

This is to certify that Mr. / Ms. Monya Shivani S. has successfully completed **Short Term Certificate Course** of 30 hours on STCMB01:Analytical Instruments in Microbiology Lab offered by Department of Microbiology from 09/07/2018 to 16/08/2018 and secured “A” grade during performance evaluation.

Principal

Course Coordinator

Head of the Department



सत्यमेव जयते

Government of Gujarat

GOVERNMENT SCIENCE COLLEGE, VANKAL

DEPARTMENT OF MICROBIOLOGY



Sr. No. SCTMB01/2018-19/54

Date: 20/08/2018

This is to certify that Mr. / Ms. Chaudhari Priyanka V. has successfully completed **Short Term Certificate Course** of 30 hours on STCMB01:Analytical Instruments in Microbiology Lab offered by Department of Microbiology from 09/07/2018 to 16/08/2018 and secured “A” grade during performance evaluation.

Principal

Course Coordinator

Head of the Department



सत्यमेव जयते

Government of Gujarat

GOVERNMENT SCIENCE COLLEGE, VANKAL

DEPARTMENT OF MICROBIOLOGY



Sr. No. SCTMB01/2018-19/113

Date: 20/08/2018

This is to certify that Mr. / Ms. Gamit Bintika M. has successfully completed **Short Term Certificate Course** of 30 hours on STCMB01:Analytical Instruments in Microbiology Lab offered by Department of Microbiology from 09/07/2018 to 16/08/2018 and secured “A” grade during performance evaluation.

Principal

Course Coordinator

Head of the Department



सत्यमेव जयते

Government of Gujarat

GOVERNMENT SCIENCE COLLEGE, VANKAL

DEPARTMENT OF MICROBIOLOGY



Sr. No. SCTMB01/2018-19/66

Date: 20/08/2018

This is to certify that Mr. / Ms. Kesrola Digvijaysinh N. has successfully completed **Short Term Certificate Course** of 30 hours on STCMB01:Analytical Instruments in Microbiology Lab offered by Department of Microbiology from 09/07/2018 to 16/08/2018 and secured “A” grade during performance evaluation.

Principal

Course Coordinator

Head of the Department



सत्यमेव जयते

Government of Gujarat

GOVERNMENT SCIENCE COLLEGE, VANKAL

DEPARTMENT OF MICROBIOLOGY



Sr. No. SCTMB01/2018-19/32

Date: 20/08/2018

This is to certify that Mr. / Ms. Rana Bhavisha M. has successfully completed **Short Term Certificate Course** of 30 hours on STCMB01:Analytical Instruments in Microbiology Lab offered by Department of Microbiology from 09/07/2018 to 16/08/2018 and secured “A” grade during performance evaluation.

Principal

Course Coordinator

Head of the Department

Government Science College, Vankal
Department of Microbiology
Short term course (2018-19)
Course Name: Analytical instruments in Microbiology Laboratory

Roll No:

Date: 16/08/2018

1. Which technique is commonly used to measure the absorbance of light by microbial cultures?
A) Gas Chromatography B) Spectrophotometry C) Mass Spectrometry D) Fluorescence Microscopy
2. What analytical method is used to separate and analyze proteins based on their size?
A) Gas Chromatography B) High-Performance Liquid Chromatography
C) Gel Electrophoresis D) Atomic Absorption Spectroscopy
3. Which technique involves the use of specific antibodies to detect and quantify antigens?
A) ELISA (Enzyme-Linked Immunosorbent Assay) B) PCR (Polymerase Chain Reaction)
C) Mass Spectrometry D) Spectrophotometry
4. Which of the following methods is used for the quantitative analysis of nucleic acids?
A) Fluorescence Microscopy B) PCR (Polymerase Chain Reaction)
C) Atomic Absorption Spectroscopy D) Gel Electrophoresis
5. Which analytical technique is employed to detect microorganisms by their interaction with specific fluorescent dyes?
A) Flow Cytometry B) Spectrophotometry
C) Mass Spectrometry D) Gas Chromatography
6. What is the primary purpose of using a centrifuge in microbiology?
A) To measure light absorption B) To identify bacterial species
C) To quantify nucleic acids D) To separate microbial cells from a liquid medium
7. Which of the following instruments is used for the high-resolution imaging of bacterial cell structures?
A) Scanning Electron Microscope B) Bright-Field Microscope
C) Phase Contrast Microscope D) Atomic Force Microscope
8. Which technique is used to measure the concentration of metal ions in microbial samples?
A) Gas Chromatography B) Mass Spectrometry
C) Atomic Absorption Spectroscopy D) High-Performance Liquid Chromatography
9. Which of the following methods involves the use of electromagnetic radiation to identify chemical compounds in a sample
A) Infrared Spectroscopy B) Flow Cytometry C) Gel Electrophoresis D) PCR (Polymerase Chain Reaction)
10. Which technique is used to detect specific proteins by utilizing antibodies labelled with a detectable marker?
A) ELISA (Enzyme-Linked Immunosorbent Assay) B) Western Blotting
C) Mass Spectrometry D) Spectrophotometry
11. What is the primary application of gas chromatography in microbiology?
A) Identification of microbial species based on metabolic products B) Quantification of nucleic acids
C) Separation of proteins by size D) Detection of bacterial cell wall components
12. Which technique is used to observe living microbial cells in their natural state without staining?
A) Phase Contrast Microscopy B) Fluorescence Microscopy
C) Bright-Field Microscopy D) Electron Microscopy
13. What is the purpose of using a fluorometer in microbiology?
A) To measure fluorescence emitted by samples B) To separate proteins based on size
C) To quantify metal ions D) To visualize cell morphology

14. Which analytical method is used to determine the sequence of nucleic acids?
A) PCR (Polymerase Chain Reaction) B) Sequencing C) Mass Spectrometry D) Gel Electrophoresis
15. Which instrument is used for real-time monitoring of microbial growth in a culture?
A) Spectrophotometer B) Microplate Reader C) Flow Cytometer D) Centrifuge
16. Which technique is used to measure the amount of a specific DNA sequence in a sample?
A) Gel Electrophoresis B) Western Blotting
C) RT-PCR (Reverse Transcription Polymerase Chain Reaction) D) Mass Spectrometry
17. Which technique is employed to visualize the distribution of specific RNA molecules in cells?
A) In Situ Hybridization (ISH) B) Flow Cytometry C) Spectrophotometry D) Gas Chromatography
18. Which of the following instruments measures the intensity of light scattering to determine cell size and complexity?
A) Flow Cytometer B) Spectrophotometer C) Atomic Absorption Spectrometer D) Mass Spectrometer
19. What is the main use of a transmission electron microscope (TEM) in microbiology?
A) To measure the concentration of microbial cultures
B) To separate proteins by size
C) To obtain high-resolution images of internal cell structures
D) To identify bacterial species based on metabolic byproducts
20. Which analytical method is used for the rapid identification of bacterial pathogens by comparing their protein profiles?
A) MALDI-TOF Mass Spectrometry B) Gel Electrophoresis
C) High-Performance Liquid Chromatography D) Atomic Absorption Spectroscopy
21. What technique is used to determine the binding affinity of a ligand to a target protein?
A) ELISA (Enzyme-Linked Immunosorbent Assay) B) Western Blotting
C) Gas Chromatography D) Surface Plasmon Resonance
22. Which method is used to identify bacterial strains by analysing their metabolic byproducts?
A) Mass Spectrometry B) Biochemical Testing
C) PCR (Polymerase Chain Reaction) D) Fluorescence In Situ Hybridization (FISH)
23. Which of the following is used to observe the surface features of microorganisms at high magnification?
A) Confocal Microscope B) Bright-Field Microscope
C) Scanning Electron Microscope (SEM) D) Transmission Electron Microscope (TEM)
24. Which analytical method provides information on the molecular weight of compounds in a sample?
A) Mass Spectrometry B) Infrared Spectroscopy
C) High-Performance Liquid Chromatography D) Spectrophotometry
25. Which technique is used to visualize specific cellular components using fluorescent dyes?
A) Bright-Field Microscopy B) Phase Contrast Microscopy
C) Transmission Electron Microscopy D) Fluorescence Microscopy

Government Science College

OMR ANSWER SHEET

EXAMINATION: Short term course 2018-19 (STC-1)
 SUBJECT: Analytical Instrument in Microbiology
 EXAM CENTER: Government science collage Vankal
 DATE: / /

Name: Moniya Shivami's.

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Q. ANSWER Q. ANSWER Q. ANSWER Q. ANSWER Q. ANSWER

<input checked="" type="checkbox"/> 1 (A) ● (C) (D)	<input checked="" type="checkbox"/> 11 ● (B) (C) (D)	<input checked="" type="checkbox"/> 21 (A) (B) (C) ●	<input type="checkbox"/> 31 (A) (B) (C) (D)	<input type="checkbox"/> 41 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 2 (A) (B) ● (D)	<input checked="" type="checkbox"/> 12 ● (B) (C) (D)	<input checked="" type="checkbox"/> 22 (A) ● (C) (D)	<input type="checkbox"/> 32 (A) (B) (C) (D)	<input type="checkbox"/> 42 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 3 ● (B) (C) (D)	<input checked="" type="checkbox"/> 13 ● (B) (C) (D)	<input checked="" type="checkbox"/> 23 (A) (B) ● (D)	<input type="checkbox"/> 33 (A) (B) (C) (D)	<input type="checkbox"/> 43 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 4 (A) ● (C) (D)	<input checked="" type="checkbox"/> 14 (A) ● (C) (D)	<input checked="" type="checkbox"/> 24 ● (B) (C) (D)	<input type="checkbox"/> 34 (A) (B) (C) (D)	<input type="checkbox"/> 44 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 5 ● (B) (C) (D)	<input checked="" type="checkbox"/> 15 (A) ● (C) (D)	<input checked="" type="checkbox"/> 25 (A) (B) (C) ●	<input type="checkbox"/> 35 (A) (B) (C) (D)	<input type="checkbox"/> 45 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 6 (A) (B) (C) ●	<input checked="" type="checkbox"/> 16 (A) (B) ● (D)	<input type="checkbox"/> 26 (A) (B) (C) (D)	<input type="checkbox"/> 36 (A) (B) (C) (D)	<input type="checkbox"/> 46 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 7 ● (B) (C) (D)	<input checked="" type="checkbox"/> 17 ● (B) (C) (D)	<input type="checkbox"/> 27 (A) (B) (C) (D)	<input type="checkbox"/> 37 (A) (B) (C) (D)	<input type="checkbox"/> 47 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 8 (A) ● (C) (D)	<input checked="" type="checkbox"/> 18 ● (B) (C) (D)	<input type="checkbox"/> 28 (A) (B) (C) (D)	<input type="checkbox"/> 38 (A) (B) (C) (D)	<input type="checkbox"/> 48 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 9 ● (B) (C) (D)	<input checked="" type="checkbox"/> 19 (A) (B) ● (D)	<input type="checkbox"/> 29 (A) (B) (C) (D)	<input type="checkbox"/> 39 (A) (B) (C) (D)	<input type="checkbox"/> 49 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 10 (A) ● (C) (D)	<input checked="" type="checkbox"/> 20 ● (B) (C) (D)	<input type="checkbox"/> 30 (A) (B) (C) (D)	<input type="checkbox"/> 40 (A) (B) (C) (D)	<input type="checkbox"/> 50 (A) (B) (C) (D)

Government Science College

OMR ANSWER SHEET

EXAMINATION: Short-term course 2018-19 (STC-D)
 SUBJECT: Analytical Instrument in microbiology lab
 EXAM CENTER: Government Science college Vankal

DATE: / /

Name:- Chaudhai Priyanka V.

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Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER
✓ 1 (A) ● (C) (D)	✗ 11 (A) ● (C) (D)	✓ 21 (A) (B) (C) ● (D)	31 (A) (B) (C) (D)	41 (A) (B) (C) (D)
✓ 2 (A) (B) ● (C) (D)	✓ 12 ● (B) (C) (D)	✓ 22 (A) ● (C) (D)	32 (A) (B) (C) (D)	42 (A) (B) (C) (D)
✓ 3 ● (B) (C) (D)	✓ 13 ● (B) (C) (D)	✓ 23 (A) (B) ● (C) (D)	33 (A) (B) (C) (D)	43 (A) (B) (C) (D)
✓ 4 (A) ● (C) (D)	✓ 14 (A) ● (C) (D)	✓ 24 ● (B) (C) (D)	34 (A) (B) (C) (D)	44 (A) (B) (C) (D)
✓ 5 ● (B) (C) (D)	✓ 15 (A) ● (C) (D)	✗ 25 (A) (B) ● (C) (D)	35 (A) (B) (C) (D)	45 (A) (B) (C) (D)
✓ 6 (A) (B) (C) ● (D)	✓ 16 (A) (B) ● (C) (D)	26 (A) (B) (C) (D)	36 (A) (B) (C) (D)	46 (A) (B) (C) (D)
✗ 7 (A) ● (C) (D)	✓ 17 ● (B) (C) (D)	27 (A) (B) (C) (D)	37 (A) (B) (C) (D)	47 (A) (B) (C) (D)
✓ 8 (A) (B) ● (C) (D)	✓ 18 ● (B) (C) (D)	28 (A) (B) (C) (D)	38 (A) (B) (C) (D)	48 (A) (B) (C) (D)
✓ 9 ● (B) (C) (D)	✓ 19 (A) (B) ● (C) (D)	29 (A) (B) (C) (D)	39 (A) (B) (C) (D)	49 (A) (B) (C) (D)
✓ 10 (A) ● (C) (D)	✓ 20 ● (B) (C) (D)	30 (A) (B) (C) (D)	40 (A) (B) (C) (D)	50 (A) (B) (C) (D)

Government Science College

OMR ANSWER SHEET

EXAMINATION: Short-term course - 2018 - 19 (STC-1)

SUBJECT: Analytical Instrument in microbiology lab

EXAM CENTER: Government Science college Vankal

DATE: / /

Name:- Ganith Binitika M.

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Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER
<input checked="" type="checkbox"/> 1 (A) ● (C) (D)	<input checked="" type="checkbox"/> 11 (A) (B) (C) ●	<input checked="" type="checkbox"/> 21 (A) (B) (C) ●	31 (A) (B) (C) (D)	41 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 2 ● (B) (C) (D)	<input checked="" type="checkbox"/> 12 ● (B) (C) (D)	<input checked="" type="checkbox"/> 22 (A) ● (C) (D)	32 (A) (B) (C) (D)	42 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 3 ● (B) (C) (D)	<input checked="" type="checkbox"/> 13 ● (B) (C) (D)	<input checked="" type="checkbox"/> 23 (A) (B) ● (D)	33 (A) (B) (C) (D)	43 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 4 (A) ● (C) (D)	<input checked="" type="checkbox"/> 14 (A) ● (C) (D)	<input checked="" type="checkbox"/> 24 (A) (B) (C) ●	34 (A) (B) (C) (D)	44 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 5 ● (B) (C) (D)	<input checked="" type="checkbox"/> 15 (A) (B) ● (D)	<input checked="" type="checkbox"/> 25 (A) (B) (C) ●	35 (A) (B) (C) (D)	45 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 6 (A) (B) (C) ●	<input checked="" type="checkbox"/> 16 ● (B) (C) (D)	26 (A) (B) (C) (D)	36 (A) (B) (C) (D)	46 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 7 ● (B) (C) (D)	<input checked="" type="checkbox"/> 17 ● (B) (C) (D)	27 (A) (B) (C) (D)	37 (A) (B) (C) (D)	47 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 8 (A) (B) ● (D)	<input checked="" type="checkbox"/> 18 ● (B) (C) (D)	28 (A) (B) (C) (D)	38 (A) (B) (C) (D)	48 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 9 ● (B) (C) (D)	<input checked="" type="checkbox"/> 19 (A) (B) ● (D)	29 (A) (B) (C) (D)	39 (A) (B) (C) (D)	49 (A) (B) (C) (D)
<input checked="" type="checkbox"/> 10 (A) (B) (C) ●	<input checked="" type="checkbox"/> 20 ● (B) (C) (D)	30 (A) (B) (C) (D)	40 (A) (B) (C) (D)	50 (A) (B) (C) (D)

Government Science College

OMR ANSWER SHEET

EXAMINATION: Short term course 2018-19 (STC-1)

SUBJECT: Analytical Instruments in microbiology 196

EXAM CENTER: Government Science College Vankar

DATE: / /

Name:- RESA014 Digvijaysinh N.

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G

Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER
1 (A) ● (C) (D)	11 ● (B) (C) (D)	21 (A) (B) (C) ●	31 (A) (B) (C) (D)	41 (A) (B) (C) (D)
2 (A) (B) ● (D)	12 ● (B) (C) (D)	22 (A) (B) ● (D)	32 (A) (B) (C) (D)	42 (A) (B) (C) (D)
3 ● (B) (C) (D)	13 (A) ● (C) (D)	23 (A) (B) ● (D)	33 (A) (B) (C) (D)	43 (A) (B) (C) (D)
4 (A) ● (C) (D)	14 (A) ● (C) (D)	24 ● (B) (C) (D)	34 (A) (B) (C) (D)	44 (A) (B) (C) (D)
5 ● (B) (C) (D)	15 (A) ● (C) (D)	25 (A) ● (C) (D)	35 (A) (B) (C) (D)	45 (A) (B) (C) (D)
6 ● (B) (C) (D)	16 (A) (B) ● (D)	26 (A) (B) (C) (D)	36 (A) (B) (C) (D)	46 (A) (B) (C) (D)
7 ● (B) (C) (D)	17 (A) ● (C) (D)	27 (A) (B) (C) (D)	37 (A) (B) (C) (D)	47 (A) (B) (C) (D)
8 (A) (B) ● (D)	18 ● (B) (C) (D)	28 (A) (B) (C) (D)	38 (A) (B) (C) (D)	48 (A) (B) (C) (D)
9 ● (B) ● (D)	19 (A) (B) ● (D)	29 (A) (B) (C) (D)	39 (A) (B) (C) (D)	49 (A) (B) (C) (D)
10 (A) ● (C) (D)	20 ● (B) (C) (D)	30 (A) (B) (C) (D)	40 (A) (B) (C) (D)	50 (A) (B) (C) (D)

Government Science College

OMR ANSWER SHEET

EXAMINATION: Short term Course 2018-19 (STC-1)

SUBJECT: Analytical Instruments in microbiology lab

EXAM CENTER: Government Science college, Vankar.

DATE: / /

Name: Ramya Bhavisha M.

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Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER	Q. ANSWER
<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	31 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	41 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D
<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	32 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	42 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D
<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	33 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	43 <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D
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