Report on

Value added Program
on
TECHNIQUES IN MOLECULAR BIOLOGY AND RDT
From 18th to 21st July 2022

The department of Microbiology had organized 4 days Add on program on Techniques in Molecular Biology and RDT from 18th July to 21st July 2022

The main **objective** was to train the students with hands on experience on the basic and advanced concepts of Molecular Biology which involves- Agarose Gel Electrophoresis, Isolation of Genomic and Plasmid DNA, Restriction Digestion and *In Vitro* DNA Ligation and to create awareness in higher education in the field of life sciences and modern research.

Thirty-two students of II- and III-year B.Sc. registered for the add on program. The sessions of the add on program were divided into 3 modules for 4 days.

On day one, the program was inaugurated by Dr. Pushpa H, Vice Principal and HOD, department of Microbiology. She welcomed students and gave an overview of the Value-Added Programs conducted by department of Microbiology for the academic year. Mrs. Soumya S Shanbhag addressed the students for the add on program and gave an overview of the program and the schedule.

The first session was started with the presentation on "Introduction to Molecular Biology and its Importance in Research" by Dr. Ch. Bhanupriya, Assistant professor, Dept. of Microbiology. This was followed by the theory session on "Introduction and preparation of buffers and calibration of pH meter" where students were given an insight on importance of buffers and the theory behind buffer preparation.

Post lunch session was hands on training on "Preparation of Buffers" where students calibrated pH meter, prepared Phosphate buffer, Citrate buffer and Tris-HCl buffer and checked the pH using pH meter. The session was handled by Mrs. Soumya S Shanbhag, Assistant Professor, Dept. of Microbiology. By end of the session students inoculated culture for genomic DNA extraction.

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Bangalore - 560 054

Principal,
M.S. Ramaiah College of Arts, Science & Commerce
MSRIT Post, MSR Nagar
Bangalore - 560 054

Head of the Department
CRO BIOLOGY
M.S. Ramaiah College of Arts,
Science & Commerce
Bangalore - 560 054

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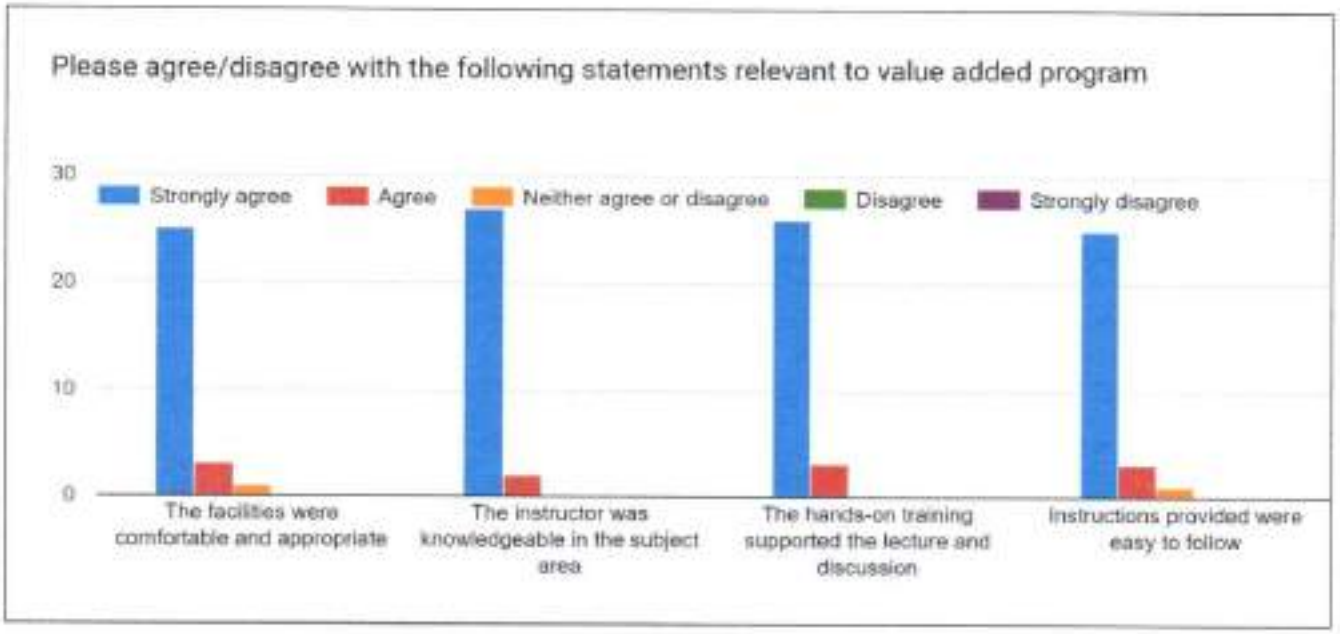
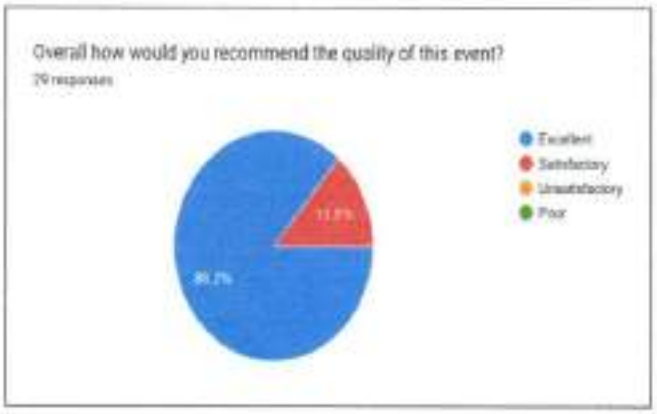
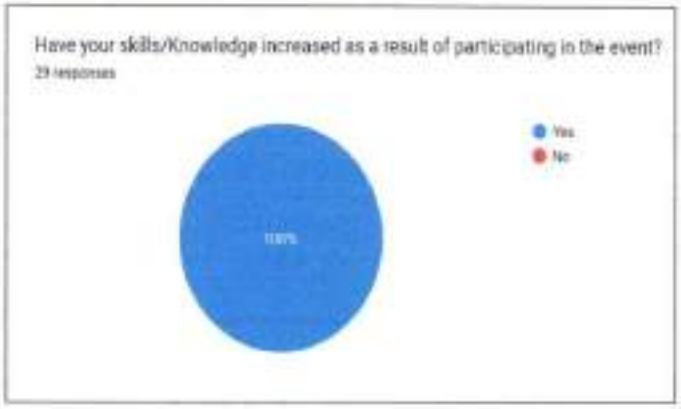
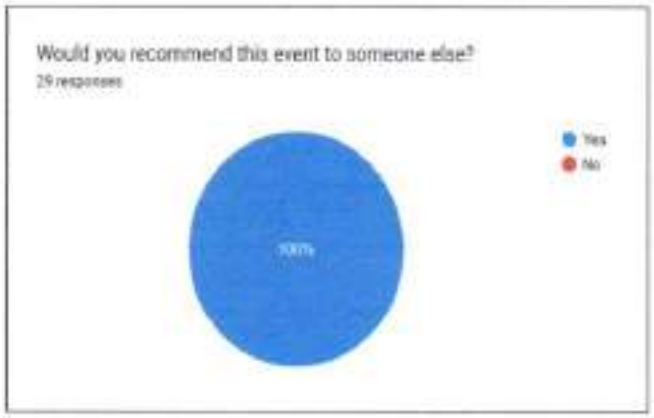
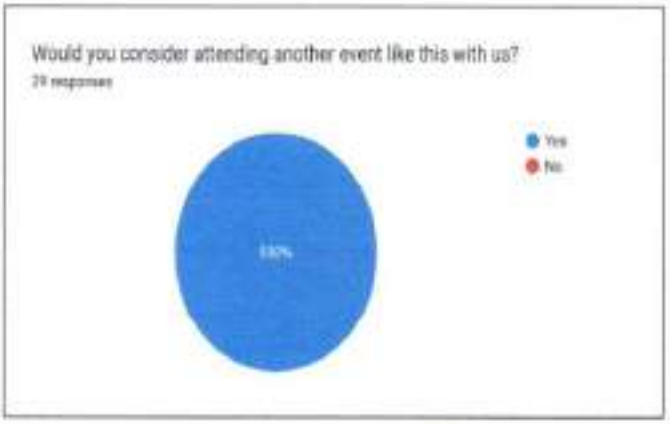
Feedback Responses











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RAMAIAH COLLEGE OF ARTS, SCIENCE AND COMMERCE

DEPARTMENT OF MICROBIOLOGY

VALUE ADDED PROGRAM ON MOLECULAR BIOLOGY AND RDT under DBT STAR COLLEGE SCHEME

From 18th to 21st July 2022

LIST OF PARTICIPANTS

Sl No.	Name of the Students	Reg. No.	Mobile Number	Semester	Signature			
					Day 1	Day 2	Day 3	Day 4
1	Meenakshi Anoop	S2014428	7338332726	IV				
2	Sakshi N Ullal	S2014580	9740618802	IV				
3	Rhitankar Mukherjee	S1914556	9836074741	VI				
4	sambhav jain	S1914566	8660619599	VI				
5	Vishwas R	S1914459	9731702962	VI				
6	SA VISHRUTHA	S1914562	7026712077	VI				
7	SWARUPA BANERJEE	S1914591	9735461522	VI				
8	NEHAL SUBBA	S1914536	6363874052	VI				
9	Samriddhi Mukherjee	S2014583	6205058269	IV				
10	Shruti Meshram	S2014459	9075635460	IV				
11	SURABHI SRINIVAS	S1914588	8197012409	VI				
12	Shwetha B R	S1914578	7892408265	VI				
13	NITHYA SHREE G	S2014552	8431653009	IV				
14	HARSHITH REDDY C K	S2014503	9986300366	IV				
15	Parth khanduri	S2014433	9305728083	IV				
16	D S SHREYAS	S2014485	6362087609	IV	SREYAS	SREYAS	SREYAS	SREYAS
17	Smruti Bhat	S1914452	9448513202	VI				

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Sl No.	Name of the Students	Reg. No.	Mobile Number	Semester	Signature			
18	DEEPIKA S	S2014488	8951168163	IV				
19	Sneha S	S1914579	8073067914	VI				
20	Sai Nand	S2014579	9980836631	IV				
21	Bhuvanjalee Basnett	S2014412	9002201600	IV				
22	Shreyas M	S1914576	7406860726	VI				
23	NIKHITHA C THAMMAIAH	S1914538	9731881968	VI				
24	HARINI A KHEMKAR	S2014500	08660428345	IV				
25	Charitha prasad	S2014482	9900494610	IV				
26	N G Sayi Sudharshana	S2014588	9886844670	IV				
27	Syed Momin Muskan	S1914592	8951802660	VI				
28	Rohini R	S1914559	7259367771	VI				
29	SR Yashaswini	S1914561	9110473670	VI				
30	S.Suryaja Iyer	S1914453	9014832960	VI				
31	Prajwal p Hebballi	S2014560	9900950756	IV				
32	Hemalatha	S2014505	8951231163	IV				

Soumya S. Shanbhag

Dr. Bhanupriya. Ch

Dr. Nimita Venugopal. C.

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College of Arts, Science & Commerce

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M S Ramaiah College of Arts, Science and Commerce

REF.: MSRCASC/MB/2021-2022/009

Date: 25/05/2022

Circular

Department of Microbiology

Value Added Programme on "Techniques in Molecular Biology and RDT"

This is to inform all II and III year B.Sc Microbiology students that Department of Microbiology is organizing 4 days Value Added Programme on **"Techniques in Molecular Biology and RDT"**

The workshop will be conducted 4 days from 18th to 21st July 2022 from 9.00am to 5.00pm, in Microbiology PG Lab and Classroom.

Interested students are required to give their names to the coordinators Mrs. Soumya S Shanbhag, Dr. Ch. Bhanupriya and Dr. Nimita Venugopal on or before 12th July 2022.

Resource person for the workshop are Mrs. Soumya S Shanbhag, Dr. Ch. Bhanupriya and Dr. Nimita Venugopal, Assistant Professors, Department of Microbiology.

Head of the Department

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Principal

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PATRONS

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Sri. M. R. Janakiram, Director - GEF
Sri. M. R. Kodandaram, Director - GEF
Sri. B. S. Ramaprasad, Chief Executive - GEF
Sri. Ramachandra, COF – GEF

ORGANIZING COMMITTEE MEMBERS

Dr. A. Nagarathna, Principal, RCASC
Dr. Pushpa H, Professor & Head
Dr. Snehalatha V, Associate Professor
Dr. Vemula Vani, Associate Professor
Dr. Prasanna Srinivas R, Assistant Professor
Mrs. Soumya S. Shanbhag, Assistant Professor
Dr. Ashok Kumar H G, Assistant Professor
Dr. Yogesh D, Assistant Professor
Dr. Triveni A G, Assistant Professor
Dr. Juliya Rani Francis, Assistant Professor
Dr. Ramesha A, Assistant Professor
Dr. Manikandan A, Assistant Professor
Dr. Ch. Bhanupriya, Assistant Professor
Dr. Nimita Venugopal C, Assistant Professor

REGISTRATION FORM

Name: .....

Course: .....

Year/Sem: .....

Contact no.: .....

E-mail: .....

Registration Fees: Free
Registration Link: https://forms.gle/j4nFjGe8pb6hJHLM7

Event Coordinators:
Mrs. Soumya S Shanbhag, 9740819951
Dr. Ch. Bhanupriya 9920961413
Dr. Nimita Venugopal C 9916048638
Department of Microbiology, MSRCASC.

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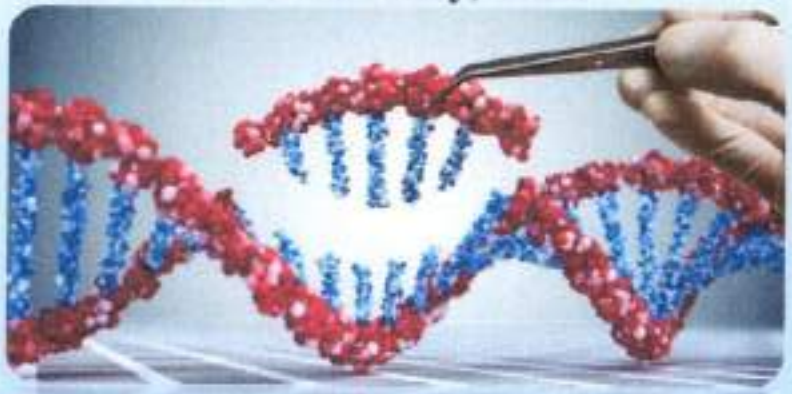
Azadi ka Amrit Mahotsav

DEPARTMENT OF BIOTECHNOLOGY
MINISTRY OF SCIENCE & TECHNOLOGY, GOVERNMENT OF INDIA

Value added programme
on
TECHNIQUES IN MOLECULAR BIOLOGY AND RDT
(Under DBT Star College Scheme)

18th to 21st July, 2022



Organized by
Department of Microbiology

M.S. Ramaiah College of
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MSRIT Post, MSR Nagar, Bangalore - 560 054
www. msrcasc.edu.in
(Re-accredited "A" by NAAC,
Affiliated to Bangalore Central University,
Approved by AICTE)

ABOUT THE COLLEGE

Dr. M.S Ramaiah, a visionary and philanthropist established "Gokula Education Foundation (GEF)", in the year 1962, to deliver education and healthcare for the betterment of mankind. Under the umbrella of GEF, M.S Ramaiah college of Arts, Science and Commerce (MSRCASC) was established in 1994. The college is affiliated to Bengaluru City University (BCU),approved by AICTE, New Delhi, recognized by UGC under 2(f) and 12 (B) of UGC Act 1956. MSRCASC is reaccredited with "A" Grade by NAAC. MSRCASC has bagged 55th rank under college category in NIRF-2022. The college has been selected under DBT-STAR College Scheme-2020. Our college is a unique learning institution offering multidisciplinary Programs which plays a pioneering role in providing academic excellence. The college offers Eight UG Programs and six PG programs in Arts, Science, and Commerce with more than 2700 students. The College has excelled record of obtaining many University ranks and Gold medals..

DEPARTMENT OF MICROBIOLOGY

The Department of Microbiology, established in the year 1999, offers both undergraduate and postgraduate courses. The Department has been Selected under DBT-STAR College Scheme and also the Department has received State level "Best Department Award 2021 from Microbiologist Society, India. The faculty of the department are highly qualified with experience and expertise in various domains of Microbiology. The department has very good infrastructural facilities to carry out teaching and research activities. The theory and practical classes lay emphasis on 'problem based learning', knowledge content, utility value, application in real life, latest developments etc. The department is undertaking research projects in the major thrust areas of microbiology and attracted funds from various agencies. Also, the faculty of the department carry out multi-disciplinary research programs, encourage students to carryout in-house research projects, present papers, publish their research work and to participate in co-curricular and extra-curricular activities.

ABOUT THE VALUE ADDED PROGRAMME

The current 'omics' era, emphasizes the understanding and applications of molecular biology and Recombinant DNA techniques for research.

Objective: The Value Added Programme aims to train the students with hands on experience on the basic and advanced concepts of Molecular Biology which involves- Agarose Gel Electrophoresis, Isolation of Genomic and Plasmid DNA, Restriction Digestion and *In Vitro* DNA Ligation.

Outcome: This workshop envisions to make students well acquainted with emerging technologies in Molecular Biology and RDT which will help them to perform efficiently with better understanding and designing new approaches in the area of Molecular Biology research.

Modules		
Module 1: Basic Concepts of Techniques in Molecular Biology	Module 2: Electrophoretic Techniques and Isolation of DNA	Module 3: Concepts in Recombinant DNA Technology
•Introduction to Molecular Biology Techniques •Handling of Micropipettes •Preparation of Buffers and Reagents	•Agarose Gel Electrophoresis •Isolation of Genomic DNA •Isolation of Plasmid DNA •Determination of Quality of Isolated DNA	•Concept of Restriction Endonucleases and Ligases •Restriction Digestion of DNA •*In vitro* DNA Ligation

Programme Schedule		No. of Hours
18/7/2022	Inauguration	1
	Introduction to the Workshop and Molecular Biology Techniques	2
18/7/2022	Handling of Micropipettes	1
	Preparation of Buffers and Reagents	1
19/7/2022	Introduction to Electrophoretic Techniques and its Applications	1
	Agarose Gel Electrophoresis	3
20/7/2022	Isolation of Genomic DNA	3
	Isolation of Plasmid DNA	3
	Determination of Quality of Isolated DNA	1
21/7/2022	Concept of Restriction Endonucleases and Ligases	1
	Restriction Digestion of DNA	5
	In vitro DNA Ligation	5
21/7/2022	Applications of Molecular Biology Techniques in Research	2
	Assessment and Feedback	1

Ramaiah College of Arts, Science and Commerce,
Department of Microbiology

Organizes

Value Added Programme

On

TECHNIQUES IN MOLECULAR BIOLOGY AND RDT

From 18th to 21st July

COURSE CONTENT

Module 1 (Basic Concepts of Techniques in Molecular Biology)

- Introduction to Molecular Biology Techniques
- Handling of Micropipettes
- Preparation of Buffers and Reagents

Module 2 (Electrophoretic Techniques and Isolation of DNA)

- Agarose Gel Electrophoresis
- Isolation of Genomic DNA
- Isolation of Plasmid DNA
- Determination of Quality of Isolated DNA

Module 3 (Concepts in Recombinant DNA Technology)

- Concept of Restriction Endonucleases and Ligases
- Restriction Digestion of DNA
- *In vitro* DNA Ligation

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Department of Microbiology

Organizes

Value Added Programme

On

TECHNIQUES IN MOLECULAR BIOLOGY AND RDT

From 18th to 21st July (9.00am to 5.00pm)

Programme Schedule

Programme Schedule		No. of Hours
18/7/2022 Monday (9.00 to 5.00)	Inauguration	1
	Introduction to the Workshop and Molecular Biology Techniques	2
18/7/2022 Monday (9.00 to 5.00)	Handling of Micropipettes	1
	Preparation of Buffers and Reagents	1
19/7/2022 Tuesday (9.00 to 5.00)	Introduction to Electrophoretic Techniques and its Applications	1
	Agarose Gel Electrophoresis	3
20/7/2022 Wednesday (9.00 to 5.00)	Isolation of Genomic DNA	3
	Isolation of Plasmid DNA	3
	Determination of Quality of Isolated DNA	1
21/7/2022 Thursday	Concept of Restriction Endonucleases and Ligases	1
	Restriction Digestion of DNA	5
	In vitro DNA Ligation	5
21/7/2022 Thursday (9.00 to 5.00)	Applications of Molecular Biology Techniques in Research	2
	Assessment and Feedback	1
	Total Hours	**30**

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M S RAMAIAH COLLEGE OF ARTS, SCIENCE AND COMMERCE

DEPARTMENT OF MICROBIOLOGY

VALUE ADDED PROGRAMME

TECHNIQUES IN MOLECULAR BIOLOGY AND RDT

18TH TO 21ST JULY 2022

FEEDBACK

Sl No	Name of the student	Reg. No.	Class	The facilities were comfortable and appropriate	The instructor was knowledgeable in the subject area	The hands-on training supported the lecture and discussion	[Instructions provided were easy to follow	Have your skills/Knowledge increased as a result of participating in the event?	Overall how would you recommend the quality of this event?	Would you recommend this event to someone	Would you consider attending another event like this with us?
1	Nithya shree G	S2014552	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
2	Sambhav palrecha	S1914566	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
3	SA VISHRUTHA	S1914562	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
4	Shwetha B R	S1914578	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
5	SURABHI SRINIVAS	S1914588	VI Sem	Agree	Agree	Agree	Agree	Yes	Excellent	Yes	Yes
6	Bhuvanjalee Basnett	S2014412	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
7	Swarupa Banerjee	S1914591	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
8	Shreyas M	S1914576	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
9	Syed Momin Muskan	S1914592	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
10	Sayi Sudharshana NG	S2014588	IV Sem	Agree	Strongly agree	Strongly agree	Strongly agree	Yes	Satisfactory	Yes	Yes
11	Samriddhi Mukherjee	S2014583	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
12	Rhitankar Mukherjee	S1914556	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
13	Hemalatha K	S2014505	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
14	Sakshi N Ullal	S2014580	IV Sem	Agree	Strongly agree	Agree	Agree	Yes	Satisfactory	Yes	Yes
15	Shruti Meshram	S2014459	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
16	D S SHREYAS	S2014485	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
17	HARSHITH REDDY C	S2014503	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
18	Sneha S	S1914579	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
19	HARINI A KHEMKAR	S2014500	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
20	Deepika s	S2014488	IV Sem	Strongly agree	Strongly agree	Strongly agree	Neither agree or	Yes	Excellent	Yes	Yes

21	Smruti Bhat	S1914452	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
22	Nehal Subba	S1914536	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
23	S.Suryaja Iyer	S1914453	VI Sem	Strongly agree	Strongly agree	Strongly agree	Agree	Yes	Excellent	Yes	Yes
24	Rohini R	S1914559	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Satisfactory	Yes	Yes
25	Meenakshi Anoop	S2014428	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
26	Sai Nand	S2014579	IV Sem	Neither agree or di	Agree	Agree	Strongly agree	Yes	Satisfactory	Yes	Yes
27	SR Yashaswini	S1914561	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
28	Vishwas R	S1914459	VI Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes
29	charitha prasad	S2014482	IV Sem	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Yes	Excellent	Yes	Yes

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M S RAMAIAH COLLEGE OF ARTS, SCIENCE AND COMMERCE
DEPARTMENT OF MICROBIOLOGY
VALUE ADDED PROGRAMME
TECHNIQUES IN MOLECULAR BIOLOGY AND RDT
18TH TO 21ST JULY 2022
FEEDBACK

Sl No	Name of the student	Reg. No.	Class	Please provide any additional comments about the event.
1	Nithya shree G	S2014552	IV Sem	Nothing
2	Sambhav palrecha	S1914566	VI Sem	Learnt a lot and helped in practical knowledge
3	SA VISHRUTHA	S1914562	VI Sem	Very informative and helped in developing better hands on training in molecular biology
4	Shwetha B R	S1914578	VI Sem	It was very informative and helpful.
5	SURABHI SRINIVAS	S1914588	VI Sem	It was an informative program
6	Bhuvanjalee Basnett	S2014412	IV Sem	Excellent
7	Swarupa Banerjee	S1914591	VI Sem	Very informative and helpful
8	Shreyas M	S1914576	VI Sem	It was very knowledgeable and informative.
9	Syed Momin Muskan	S1914592	VI Sem	Very knowledgeable and easily understandable
10	Sayi Sudharshana NG	S2014588	IV Sem	It was a good experience.
11	Samriddhi Mukherjee	S2014583	IV Sem	We would want more such informative extra curricular courses and practical works.
12	Rhitankar Mukherjee	S1914556	VI Sem	The courses offered by the Department of Microbiology as Value Added Program are really intree and helped us gain extra Lab knowledge. Hand on training helped us for our future studies. Hope to participate in more such Programs
13	Hemalatha K	S2014505	IV Sem	The teachers were very interactive and they cleared all our duobts....gained very much practical knowledge....
14	Sakshi N Ullal	S2014580	IV Sem	It was great program.
15	Shruti Meshram	S2014459	IV Sem	Value added program helped me to learn the concept very well. And looking forward to participate in more programs like this.
16	D S SHREYAS	S2014485	IV Sem	Every thing was good
17	HARSHITH REDDY C K	S2014503	IV Sem	Perfect Hands-On Workshop 100%
18	Sneha S	S1914579	VI Sem	Informative and helpful

19	HARINI A KHEMKAR	S2014500	VI Sem	Nimita ma'am's lecture was very fast and difficult to follow for me personally. The event overall was Excellent and i enjoyed learning all the 4 days. Thank you lecturers ☺
20	Deepika s	S2014488	IV Sem	I am thankful to our HOD and all the three resource person for providing an opportunity of hands on experience.
21	Smruti Bhat	S1914452	VI Sem	Amazing Hands-on-training, my skills set has definitely been improved after I missed learning this technique due to Covid in my 4th semester. Thank you for this wonderful opportunity!
22	Nehal Subba	S1914536	VI Sem	Everything was fine.
23	S.Suryaja Iyer	S1914453	VI Sem	It was informative, knowledgeable, easy to follow. Thank you for conducting this training.
24	Rohini R	S1914559	VI Sem	It was a good experience
25	Meenakshi Anoop	S2014428	IV Sem	Thank you for taking the time out of your busy schedule to conduct this hands on training experience for us. It will surely help me in the future.
26	Sai Nand	S2014579	IV Sem	Was a good experience.
27	SR Yashaswini	S1914561	VI Sem	Good experience
28	Vishwas R	S1914459	VI Sem	It was a very informative learning experience which will surely help me in the future. Thank you.
29	charitha prasad	S2014482	IV Sem	very knowledgeable, there was an enthusiastic response from both students and professors.

1) Mrs. Soumya S. Shanbhag 21/7/22

2) Dr. Bhanupriya. Ch 21/7/22

3) Dr. Nimita Venugopal. C. 25/7/22

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DEPARTMENT OF MICROBIOLOGY

Value added Programme on

TECHNIQUES IN MOLECULAR BIOLOGY AND RDT

18th to 21st July 2022

Question Paper for Assessment

The most common type of gel used for DNA separation is *

- a. Agar
- b. Polyacrylamide
- c. Agarose
- d. All of the above

The speed of migration of ions in an electric field depends on *

- a. Magnitude of charge and mass of molecules
- b. Magnitude of charge and shape of the molecule
- c. Shape and size of the molecule
- d. Magnitude of charge, shape and mass of molecules

The technique electrophoresis, for the separation of charged molecules was developed by *

- a. Tswett
- b. Svedberg
- c. Tiselius
- d. Sanger

In electrophoresis, DNA will migrate towards

- a. Cathode or positive electrode
- b. Anode or negative electrode
- c. Cathode or negative electrode
- d. Anode or positive electrode

Which DNA ligase enzyme is used in genetic engineering? *

- a. Bacterial ligase
- b. T4 ligase
- c. Yeast ligase
- d. Pseudomonas ligase

The term 'endonuclease' refers to cutting the DNA sequence from—— *

- a. Only within the polynucleotide chain, not at the ends
- b. The ends of the chain
- c. Anywhere in the chain
- d. Exactly in the middle of the chain

After cleaving the sequence, the nature of the ends created by the type II restriction endonuclease is *

- a. The ends created are always single stranded
- b. The ends created are always double stranded
- c. Either the ends are single stranded or they are double stranded
- d. One end is single stranded and one end is double stranded

14. Restriction enzymes are also called *

- a. Molecular knives
- b. Molecular scissors
- c. Molecular scalpels
- d. All of the above

What is the purpose of buffer system in electrophoresis *

- ◯ Protects the DNA from degradation
- ◯ Helps in migration of charged and molecules
- ◯ Carries the sample while resisting pH changes in the overall solution
- ◯ None of the above

Among the following who is known as the "Father of genetic engineering" *

- ◯ Hamilton Smith
- ◯ Raymong Gosling
- ◯ Paul Berg
- ◯ Joshua lederberg

The landmark picture clicked by Raymond Gosling "Photo 51" of DNA X-ray Crystallography. Why it is named as 51?? *

- ◯ As it was discovered in the year 1951
- ◯ As it is the 51st photo clicked of DNA X-ray crystallography
- ◯ As there are 51 nucleotides in the DNA obtained
- ◯ As that is his lucky number

How is the purity of DNA evaluated at absorbance 260/280 nm *

- ◯ 1.8 to 2.0
- ◯ > 2.0
- ◯ < 1.8
- ◯ 1.8

M S RAMAIAH COLLEGE OF ARTS, SCIENCE AND COMMERCE

DEPARTMENT OF MICROBIOLOGY

VALUE ADDED PROGRAMME

TECHNIQUES IN MOLECULAR BIOLOGY AND RDT

18TH TO 21ST JULY 2022

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3	Syed Momin Muskan	S1914592	muskansyed128@gmail.com	VI	30 / 40
4	Hemalatha K	S2014505	hemalatha6920@gmail.com	IV	32 / 40
5	Sakshi N Ullal	S2014580	nsakshi.2002@gmail.com	IV	34 / 40
6	S.Suryaja Iyer	S1914453	suryajasree98@gmail.com	VI	24 / 40
7	Sai Nand	S2014579	hebbarsainand@gmail.com	IV	34 / 40
8	Sayi Sudharshana NG	S2014588	ssudharshana22@gmail.com	IV	34 / 40
9	Nithya shree G	S2014552	nshree495@gmail.com	IV	26 / 40
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29	Rohini R	S1914559	irohiniramappa@gmail.con	VI	32 / 40
30	Nishant Kumar	S2014550	snishant902@gmail.com	IV	28 / 40

1) Soumya S Shanbhag 21/7/22

2) Dr. Bhanupriya. Ch 21/7/22

3) Dr. Nimita Venugopal. C 25/7/22

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RAMAIAH
College of Arts, Science & Commerce

Azadi Ka Amrit Mahotsav

DEPARTMENT OF BIOTECHNOLOGY
MINISTRY OF SCIENCE & TECHNOLOGY,
GOVERNMENT OF INDIA

Certificate

This is to Certify that Charitha Prasad

of B.Sc - IV Semester **has participated in Value Added Program on** "...niques in Molecular Biology and RDT-under DBT Star College Scheme" **held from 18th - 21st July, 2022 Organized by The Department of Microbiology, M S Ramaiah College of Arts, Science and Commerce, Bangalore**

Pushpa H

Dr. Pushpa H
Vice Principal & Head, Department of Microbiology
MSRCASC, Bangalore

Vatsala G

Dr. Vatsala G
Principal
MSRCASC, Bangalore

RAMAIAH COLLEGE OF ARTS, SCIENCE AND COMMERCE

DEPARTMENT OF MICROBIOLOGY

VALUE ADDED PROGRAM ONMOLECULAR BIOLOGY AND RDT

Certificate Distribution

Sl No.	Name of the Students	Reg. No.	Received Certificates	Signature
1	Meenakshi Anoop	S2014428		
2	Sakshi N Ullal	S2014580		
3	Rhitankar Mukherjee	S1914556	Yes	
4	sambhav jain	S1914566	Yes	
5	Vishwas R	S1914459	Yes	
6	SA VISHRUTHA	S1914562	Yes	
7	Swarupa Banerjee	S1914591	Yes	
8	NEHAL SUBBA	S1914536	Yes	
9	Samriddhi Mukherjee	S2014583		
10	Shruti Meshram	S2014459		
11	SURABHI SRINIVAS	S1914588	Yes	
12	Shwetha B R	S1914578	Yes	
13	NITHYA SHREE G	S2014552		
14	DEEPIKA S	S2014488		
15	HARSHITH REDDY C K	S2014503	Yes	
16	D S SHREYAS	S2014485	YES	SREYAS
17	Smruti Bhat	S1914452	Yes	
18	Sneha S	S1914579	Yes	
19	Sai Nand	S2014579		
20	Bhuvanjalee Basnett	S2014412		
21	Shreyas M	S1914576	Yes	
22	HARINI A KHEMKAR	S2014500	Yes	
23	Charitha prasad	S2014482		
24	N G Sayi Sudharshana	S2014588		
25	Syed Momin Muskan	S1914592	YES	
26	Rohini R	S1914559	Yes	
27	SR Yashaswini	S1914561	Yes	
28	S Suryaja Iyer	S1914453	Yes	
29	Hemalatha	S2014505	Yes	

Resource Person **HOD**

RAMAIAH COLLEGE OF ARTS, SCIENCE AND COMMERCE
DEPARTMENT OF MICROBIOLOGY
VALUE ADDED PROGRAM ON TECHNIQUES IN MOLECULAR BIOLOGY AND RDT
ATTENDANCE

Sl No	Name of the Students	Reg. No.	Signature																												
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Meenakshi Anoop	S2014428																														
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