

### STUDENTS FEEDBACK ON CURRICULUM

This questionnaire is to collect information relating to your satisfaction towards curriculum for creating conducive atmosphere for teaching and learning. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

|                     |               |
|---------------------|---------------|
| Academic Year       | 2017-18       |
| Branch              | Biotechnology |
| Name of the Student | Sindhu.K      |
| USN                 | 15G14BT034    |

Rate the curriculum/syllabus on the following Points

| NO | Statements  | Excellent | Very good | Good | Average | Below Average |
|----|---|-----------|-----------|------|---------|---------------|
|    |   | 5         | 4         | 3    | 2       | 1             |
| 1  | How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course? | ✓         |           |      |         |               |
| 2  | How do you rate the allocation of the credits to the courses?   |           | ✓         |      |         |               |
| 3  | Relevance for implementation in projects  | ✓         |           |      |         |               |
| 4  | How do you rate the electives offered in relation to the technological advancements?  | ✓         |           |      |         |               |
| 5  | How do rate the evaluation scheme designed for each of the course?  | ✓         |           |      |         |               |
| 6  | How do you rate the percentage of courses having LAB components?  |           | ✓         |      |         |               |
| 7  | Curriculum is sufficient to make you analyze the engineering problems and its suitable solution                               | ✓         |           |      |         |               |

Suggestions:

Signature

*Sindhu.K*

*[Signature]*  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057





### STUDENTS FEEDBACK ON CURRICULUM

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|                     |                |
|---------------------|----------------|
| Academic Year       | 2017-18        |
| Branch              | BIO TECHNOLOGY |
| Name of the Student | Nizanjana      |
| USN                 | 15G14B5027     |

Rate the curriculum/syllabus on the following Points

| SL NO | Statements  | Excellent | Very good | Good | Average | Below Average |
|-------|---|-----------|-----------|------|---------|---------------|
|       |   | 5         | 4         | 3    | 2       | 1             |
| 1     | How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course? | ✓         |           |      |         |               |
| 2     | How do you rate the allocation of the credits to the courses?   | ✓         |           |      |         |               |
| 3     | Relevance for implementation in projects  | ✓         |           |      |         |               |
| 4     | How do you rate the electives offered in relation to the technological advancements?  |           | ✓         |      |         |               |
| 5     | How do rate the evaluation scheme designed for each of the course?  |           | ✓         |      |         |               |
| 6     | How do you rate the percentage of courses having LAB components?  | ✓         |           |      |         |               |
|       | Curriculum is sufficient to make you analyze the engineering problems and its suitable solution                               | ✓         |           |      |         |               |

Suggestions:

  
Signature

  
**Principal**  
Sapthagiri College of Engineering  
Chikkasandra, Hesarghatta Road  
Bangalore-560 057



### STUDENTS FEEDBACK ON CURRICULUM

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|                     |               |
|---------------------|---------------|
| Academic Year       | 2017-18       |
| Branch              | Biotechnology |
| Name of the Student | Mughanam      |
| USN                 | 15E14BTO24    |

Rate the curriculum/syllabus on the following Points

| NO | Statements  | Excellent | Very good | Good | Average | Below Average |
|----|---|-----------|-----------|------|---------|---------------|
|    |   | 5         | 4         | 3    | 2       | 1             |
| 1  | How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course? | ✓         |           |      |         |               |
| 2  | How do you rate the allocation of the credits to the courses?   | ✓         |           |      |         |               |
| 3  | Relevance for implementation in projects  | ✓         |           |      |         |               |
| 4  | How do you rate the electives offered in relation to the technological advancements?  | ✓         |           |      |         |               |
| 5  | How do rate the evaluation scheme designed for each of the course?  | ✓         |           |      |         |               |
| 6  | How do you rate the percentage of courses having LAB components?  | ✓         |           |      |         |               |
| 7  | Curriculum is sufficient to make you analyze the engineering problems and its suitable solution                               | ✓         |           |      |         |               |

Suggestions: Should meet Industrial Standard

  
Signature

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057





### FACULTY FEEDBACK ON CURRICULUM

This questionnaire is intended to collect information relating to your satisfaction towards the curriculum, teaching, learning and evaluation. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

|                     |                     |
|---------------------|---------------------|
| Academic Year       | 2017-2018           |
| Branch              | BT                  |
| Name of the Faculty | PRASHANTH KUMAR H.P |
| Designation         | AP                  |
| Subject/Sub. code   | BIOINFORMATICS      |

Rate the curriculum/syllabus on the following Points

| SL NO | Statements   | Excellent | Very good | Good | Average | Below Average |
|-------|--|-----------|-----------|------|---------|---------------|
|       |  | 5         | 4         | 3    | 2       | 1             |
| 1     | Do you feel that the curriculum is defined in a way to clarify your teaching goals and what you expect your students to learn? | ✓         |           |      |         |               |
| 2     | Is the curriculum sufficient to bridge the gap between industry standards /current global scenarios and academics?             |           | ✓         |      |         |               |
| 3     | Is the timely coverage of curriculum possible in the mentioned number of hours?  |           | ✓         |      |         |               |
| 4     | Sufficient reference material and books are available for the topics mentioned in the curriculum?                              |           |           | ✓    |         |               |
| 5     | The evaluation methods mentioned in the curriculum are sufficient for providing proper assessment?                             |           | ✓         |      |         |               |
| 6     | Curriculum is suitable to the course   | ✓         |           |      |         |               |
| 7     | The curriculum/course of this subject increased my knowledge and perspective in the subject area                               |           | ✓         |      |         |               |

Suggestions:

  
Signature

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hessarghatta Road  
Bangalore-560 057





SRI SRINIVASA EDUCATIONAL & CHARITABLE TRUST (R)  
**Sapthagiri College of Engineering**  
 (Affiliated to Visvesvaraya Technological University, Belgaum & Approved by AICTE, New Delhi)

### ALUMNI FEEDBACK ON CURRICULUM

We are glad that you have spent valuable years pursuing courses of your choice at SCE. We shall be thankful if you can spare some of your valuable time to fill up this feedback form and give us valuable suggestions for further improvement of the College. Your valuable inputs will be of great use to improve the quality of our academic programs and enhance the credibility of our Institution. Rate the adequacy of following as they were during your tenure as a student

|                     |                |
|---------------------|----------------|
| Year of Passing     | 2017           |
| Branch              | Biotechnology  |
| Name                | Suryasheshadri |
| Status : Work/Study | work           |
| Phone no            |                |

Rate the curriculum/syllabus on the following Points

| SL NO | Statements   | Excellent | Very good | Good | Average | Below Average |
|-------|--|-----------|-----------|------|---------|---------------|
|       |  | 5         | 4         | 3    | 2       | 1             |
| 1     | When you compare yourself with other counterparts from other Institution, you feel that you got most of all the facilities which is not available in other Institution | ✓         |           |      |         |               |
| 2     | Learning value (in terms of skills, concepts, knowledge, analytical abilities or broadening perspectives)  |           | ✓         |      |         |               |
| 3     | Curriculum is sufficient to make you analyze the engineering problems and its suitable solution  | ✓         |           |      |         |               |
| 4     | How do you rate the learning experience in terms of their relevance to the real life application   | ✓         |           |      |         |               |
| 5     | Ability to work in teams   |           | ✓         |      |         |               |
| 6     | Ability to link theory to practice   | ✓         |           |      |         |               |
| 7     | How do you rate the course/curriculum content that you have learnt in relation to your current job   | ✓         |           |      |         |               |
| 8     | Compatibility with industry standards  | ✓         |           |      |         |               |

Suggestions:

*Suryasheshadri*  
 Signature

  
**Principal**  
 Sapthagiri College of Engineering  
 Chikkasandra, Hesarghatta Road  
 Bangalore- 560 057



### STUDENTS FEEDBACK ON CURRICULUM

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|                     |               |
|---------------------|---------------|
| Academic Year       | 2017-2018     |
| Branch              | Biotechnology |
| Name of the Student | Dheeshma B.S  |
| USN                 | 15G14BT015    |

Rate the curriculum/syllabus on the following Points

| NO | Statements  | Excellent<br>5 | Very good<br>4 | Good<br>3 | Average<br>2 | Below Average<br>1 |
|----|---|----------------|----------------|-----------|--------------|--------------------|
| 1  | How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course? | ✓              | ✓              |           |              |                    |
| 2  | How do you rate the allocation of the credits to the courses?   | ✓              |                |           |              |                    |
| 3  | Relevance for implementation in projects  |                |                |           |              |                    |
| 4  | How do you rate the electives offered in relation to the technological advancements?  |                | ✓              |           |              |                    |
| 5  | How do rate the evaluation scheme designed for each of the course?  | ✓              |                |           |              |                    |
| 6  | How do you rate the percentage of courses having LAB components?  |                | ✓              |           |              |                    |
| 7  | Curriculum is sufficient to make you analyze the engineering problems and its suitable solution                               | ✓              |                |           |              |                    |

Suggestions:

*Dheeshma B.S*  
Signature

*B*  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Kesaraiah Road  
Bangalore-560 057





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**Sapthagiri College of Engineering**  
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### FACULTY FEEDBACK ON CURRICULUM

This questionnaire is intended to collect information relating to your satisfaction towards the curriculum, teaching, learning and evaluation. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

|                     |                                |
|---------------------|--------------------------------|
| Academic Year       | 2017-18                        |
| Branch              | BIOTECHNOLOGY                  |
| Name of the Faculty | SHOBHA. G                      |
| Designation         | ASSISTANT PROFESSOR            |
| Subject/Sub. code   | UPSTREAM PROCESSING TECHNOLOGY |

Rate the curriculum/syllabus on the following Points

| SL NO | Statements   | Excellent<br>5 | Very good<br>4 | Good<br>3 | Average<br>2 | Below Average<br>1 |
|-------|--|----------------|----------------|-----------|--------------|--------------------|
| 1     | Do you feel that the curriculum is defined in a way to clarify your teaching goals and what you expect your students to learn? | ✓              |                |           |              |                    |
| 2     | Is the curriculum sufficient to bridge the gap between industry standards /current global scenarios and academics?             | ✓              |                |           |              |                    |
| 3     | Is the timely coverage of curriculum possible in the mentioned number of hours?  | ✓              |                |           |              |                    |
| 4     | Sufficient reference material and books are available for the topics mentioned in the curriculum?                              | ✓              |                |           |              |                    |
| 5     | The evaluation methods mentioned in the curriculum are sufficient for providing proper assessment?                             |                | ✓              |           |              |                    |
| 6     | Curriculum is suitable to the course   | ✓              |                |           |              |                    |
| 7     | The curriculum/course of this subject increased my knowledge and perspective in the subject area                               |                | ✓              |           |              |                    |

Suggestions: Required to provide basic and applied training in the subject for development of skills for successful career.

  
Signature

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Mesaghatta Road  
Bangalore-560 057





### ALUMNI FEEDBACK ON CURRICULUM

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|                     |                |
|---------------------|----------------|
| Year of Passing     | 2017           |
| Branch              | BIO TECHNOLOGY |
| Name                | AKASH R        |
| Status : Work/Study | WORK           |
| Phone no            |                |

Rate the curriculum/syllabus on the following Points

| SL NO | Statements   | Excellent | Very good | Good | Average | Below Average |
|-------|--|-----------|-----------|------|---------|---------------|
|       |  | 5         | 4         | 3    | 2       | 1             |
| 1     | When you compare yourself with other counterparts from other Institution, you feel that you got most of all the facilities which is not available in other Institution | ✓         |           |      |         |               |
| 2     | Learning value (in terms of skills, concepts, knowledge, analytical abilities or broadening perspectives)  |           | ✓         |      |         |               |
| 3     | Curriculum is sufficient to make you analyze the engineering problems and its suitable solution  | ✓         |           |      |         |               |
| 4     | How do you rate the learning experience in terms of their relevance to the real life application   |           | ✓         |      |         |               |
| 5     | Ability to work in teams   | ✓         |           |      |         |               |
| 6     | Ability to link theory to practice   | ✓         |           |      |         |               |
| 7     | How do you rate the course/curriculum content that you have learnt in relation to your current job   |           | ✓         |      |         |               |
| 8     | Compatibility with industry standards  | ✓         |           |      |         |               |

Suggestions:

Akash R  
 Signature

Principal  
 Sapthagiri College of Engineering  
 Chikkasandra, Mesaraghatta Road  
 Bangalore- 560 057



# Sapthagiri College of Engineering

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#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057






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## Department of Biotechnology

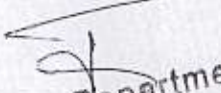
### CIRCULAR

Date: 22/05/2018

This is to inform that there will be a meeting of Academic committee members for analyzing curriculum syllabus of academic year 2018-19. The meeting is scheduled on 23/05/2018 at 11.30 am in HOD's chamber.

| Sl No. | Faculty Name             | Designation         | Signature   |
|--------|--------------------------|---------------------|---|
| 1      | Dr.Rohit K C             | HOD                 |    |
| 2      | Dr.Veena S More          | Professor           |   |
| 3      | Prof.Prashanth Kumar H P | Assistant Professor |  |
| 4      | Prof.Soumya C            | Assistant Professor |  |
| 5      | Prof.Shobha G            | Assistant Professor |  |

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057

  
Head of the Department  
Dept. of Biotechnology  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057



Date: 23/05/2018



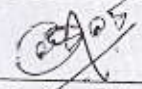


### MINUTES OF MEETING

With reference to circular dated on 22/05/2018, the academic committee member assembled in HODs chamber for addressing the following agenda.

#### Agenda:

- Reviewing the department curriculum syllabus of Academic Year 2018-19
- Reviewing the feedback analysis of various stake holders of academic year 2017-18
- Identifying the gaps in the syllabus
- Action to be taken for the identified gaps.

During the meeting the following members were present

| Sl No. | Faculty Name             | Designation         | Signature   |
|--------|--------------------------|---------------------|---|
| 1      | Dr Rohit K C             | HOD                 |  |
| 2      | Dr.Veena S More          | Professor           |  |
| 3      | Prof.Prashanth Kumar H P | Assistant Professor |  |
| 4      | Prof.Soumya C            | Assistant Professor |  |
| 5      | Prof.Shobha G            | Assistant Professor |  |

The following points were discussed in the meeting

1. The committee members reviewed the analysis of department curriculum syllabus.
2. The committee members discussed about the feedback of department curriculum syllabus.
3. The members identified the gaps based on the analysis.
4. The following actions were taken for the gaps that are identified.

  
**Principal**  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057



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Phone: 080-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

## Department of Biotechnology

| SL.NO | SEM  | Course Title             | Identified Gap                   |
|-------|--|--------------------------|----------------------------------|
| 1     | 5 <sup>th</sup> Sem<br>7 <sup>th</sup> Sem | Plant Biotechnology      | Lack of practical implementation |
| 2     | 4 <sup>th</sup> Sem<br>2 <sup>nd</sup> Sem | Clinical data management | Lack of practical implementation |

### Action Taken:

Based on the feedback obtained from Students, Faculties and Alumni and analysis of syllabus by department academic committee members, it was decided to conduct certification course on Plant Tissue Culture Techniques and Clinical data management to overcome the gaps identified in the curriculum/syllabus.

HOD, BT  
Head of the Department  
Dept of Bio Technology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore - 56

Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road,  
Bangalore - 560057





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Phone: 080-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

## Department of Biotechnology

Date: 28/05/2018

To

IQAC Coordinator

Sapthagiri College of Engineering

Bengaluru-560 057

Respected sir/madam,

Subject: Requisition for conduction of certification course and approval from Governing Council.

With respect to the Academic committee members meeting was held for analyzing department curriculum/syllabus for the academic year 2018-19. The committee members identified few gaps after analyzing the syllabus and feedback from the stakeholders. To bridge the gaps identified in the curriculum, the committee members decided to conduct a certification course on Plant Tissue Culture Techniques from 9<sup>th</sup> July 2018 to 21<sup>st</sup> July 2018 and Clinical data management from 21<sup>st</sup> January 2019 to 28<sup>th</sup> January 2019 for the academic year 2018-19. So, I request you to forward and get the approval from the governing council for the same.

Thanking You,

Enclosure: Budget Proposal

Forwarded for G.C approval  
of ratification

H.R. Ravi

Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta  
Bengaluru-560057

Head of the Department  
Dept. of Biotechnology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bengaluru - 56



# Sapthagiri College of Engineering

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## Department of Biotechnology

Date: 28/05/2018

To

IQAC Coordinator  
Sapthagiri College of Engineering  
Bengaluru-560 057

Respected sir/madam,

Subject: Budget Proposal for conduction of certification program on "Plant Tissue Culture Techniques" and "Clinical Data management"

The Budget Proposal for conduction a certificate program on Plant Tissue Culture Techniques from 9<sup>th</sup> July 2018 to 21<sup>st</sup> July 2018 and Clinical Data management from 21<sup>st</sup> January 2019 to 28<sup>th</sup> January 2019 is hereby enclosed for your kind consideration and approval.

The details of the recurring budget are given as follows:

Recurring Amount:

| Sl. No. | Description  | Quantity | Amount in Rs. |
|---------|--------------|----------|---------------|
| 1       | Bouquet      | 1        | 500           |
| 2       | Certificates | Students | 4000          |
| 3       | Others       |          | 2000          |
| Total   |              |          | 6500          |

Forwarded for G.E approval  
and ratification

H.R. Ram

Head of the Department  
Dept. of Bio Technology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore - 57

Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057



## Sapthagiri College of Engineering


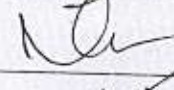
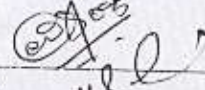


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### Department of Biotechnology


02-07-2018

#### CIRCULAR

This is to inform that the following Curriculum Board members are requested to attend the meeting on 03/07/2018 at 10.30 AM in the HODs chamber to decide the syllabus and the lesson plan for the certificate program on "Plant Tissue Culture Techniques"

| Sl No. | Faculty Name             | Designation         | Signature   |
|--------|--------------------------|---------------------|---|
| 1      | Dr.Rohit K C             | HOD                 |    |
| 2      | Dr.Veena S More          | Professor           |   |
| 3      | Prof.Prashanth Kumar H P | Assistant Professor |  |
| 4      | Prof.Sounya C            | Assistant Professor |  |
| 5      | Prof.Shobha G            | Assistant Professor |  |

  
**Principal**  
Sapthagiri College of Engineering  
#14/5, Hesaraghatta Road  
Bengaluru - 560057

  
**Head of the Department**  
Dept. of Biotechnology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
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Bangalore - 57





# Sapthagiri College of Engineering

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#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057

Phone: 030-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

## Department of Biotechnology

Date: 02-07-2018

To,

Mr. Rohith Raj  
Managing Partner  
Chlorbios Pvt. Ltd.  
Yalahanka  
Bangalore

Respected Sir,

Subject: Invitation as a "Guest Speaker" in certification program and to attend meeting to discuss about the certification program

Department of Biotechnology have planned to conduct a certification program titled "Plant Tissue Culture techniques" for 5<sup>th</sup> & 7<sup>th</sup> semester students from 9<sup>th</sup> July 2018 to 21<sup>st</sup> July 2018. In this connection, we are privileged to invite you as a guest speaker on the above mentioned topic.

Thanking you for your kind acceptance to our request on phone. We request you to attend the meeting to discuss about the conduction of certification course on 03/07/2018 at 10.30 AM. We look forward to welcome you at SCE.

Thanking you

Yours faithfully

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore - 560 057

  
Head of the Department  
Dept. of Bio - Technology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore - 57



### Minutes of Meeting

A meeting was conducted on 03-Jul-2018 in BT HoD's Chamber to discuss and approve the following about the one week Certification Course for 5<sup>th</sup> and 7<sup>th</sup> semester BT Students.

- **Course Title :** Plant Tissue Culture Techniques
- **Resource Personnel:** Mr.Rohith Raj, Managing Partner Chlorbics Pvt.Ltd.Yalahanka Bangalore.
- **Course Duration & Date:** 9<sup>th</sup> July 2018 to 21<sup>st</sup> July 2018

### Syllabus and Schedule of the certification program

| Date       | Time               | Topics  |
|------------|--------------------|---|
| 9-7-2018   | 8:30 AM - 12:30 PM | Techniques in Plant Tissue culture.                     |
|            | 1:30 PM - 4:30 PM  | Media Optimization                                      |
| 10-7-2018  | 8:30 AM - 12:30 PM | Callus culture  |
|            | 1:30 PM - 4:30 PM  | Hands on Media Preparations                             |
| 11-7-2018  | 8:30 AM - 12:30 PM | Organogenesis   |
|            | 1:30 PM - 4:30 PM  | Hands on session on inoculation explants aseptically    |
| 12-7-2018  | 8:30 AM - 12:30 PM | Suspension Culture, Types of suspension Culture         |
|            | 1:30 PM - 4:30 PM  | Hands on session on preparation of suspension culture   |
| 13-7-2018  | 8:30 AM - 12:30 PM | Measurement of growth of cultures                       |
|            | 1:30 PM - 4:30 PM  | Secondary metabolites in plant culture                  |
| 14-7-2018  | 8:30 PM - 12:30 PM | Protoplast culture                                      |
|            | 1:30 PM - 4:30 PM  | Method of production of protoplast culture              |
| 15-07-2018 | 8:30 AM - 12:30 PM | Application of Protoplast culture                       |
|            | 1:30 PM - 4:30 PM  | Hands on session Isolation of Protoplast and its fusion |
| 16-07-2018 | 8:30 AM - 12:30 PM | Hands on session Isolation of Protoplast and its fusion |
|            | 1:30 PM - 4:30 PM  | Hands on session Isolation of Protoplast and its fusion |
| 17-07-2018 | 8:30 AM - 12:30 PM | Crop development through Anther Culture                 |

  
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Sapthagiri College of Engineering  
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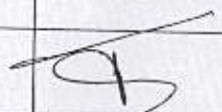




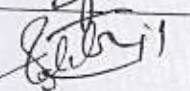
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### Department of Biotechnology

|            |                    |   |
|------------|--------------------|---|
|            | 1:30 PM - 4.30 PM  | Method of production of anther culture  |
| 18-07-2018 | 8:30 AM - 12:30 PM | Application of anther Culture   |
|            | 1:30 PM - 4.30 PM  | Hands on session on pretreatment of anthers and media optimization for Anther culture |
| 19-07-2018 | 8:30 AM - 12:30 PM | Hands on session on pretreatment of anthers and media optimization for Anther culture |
|            | 1:30 PM - 4.30 PM  | Hands on session on pretreatment of anthers and media optimization for Anther culture |
| 20-07-2018 | 8:30 AM - 12:30 PM | Cell viability measurement  |
|            | 1:30 PM - 4.30 PM  | Viability tests   |
| 21-07-2018 | 8:30 AM - 12:30 PM | Hands on session on viability of culture cells  |
|            | 1:30 PM - 4.30 PM  | Hands on session on viability of culture cells  |

The following Curriculum board members were present

| Sl No. | Faculty Name              | Designation         | Signature   |
|--------|---------------------------|---------------------|---|
| 1      | Dr. Rohit K C             | HOD                 |  |
| 2      | Dr. Veena S More          | Professor           |  |
| 3      | Prof. Prashanth Kumar H P | Assistant Professor |  |
| 4      | Prof. Soumya C            | Assistant Professor |  |
| 5      | Prof. Shobha G            | Assistant Professor |  |
| 6      | Mr. Rohith Raj            | Guest Speaker       |  |

**HOD**  
Head of the Department  
Dept. of Bio. Technology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore - 57

**Principal**  
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Chikka - Hesaraghatta Main Road  
Bangalore - 560057



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### Department of Biotechnology

## NOTICE

As a part of programming skill development Department of Information Science and Engineering is conducting Five days Certification Course on **"PLANT TISSUE CULTURE TECHNIQUES"** from 9<sup>TH</sup> JULY 2018 TO 21<sup>ST</sup> JULY 2018

All the 5<sup>th</sup> and 7<sup>th</sup> sem BT students must attend the course compulsorily.

Head of the Department  
Signature of HOD  
Dept. of Biotechnology  
Sapthagiri College of Engineering  
#14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560057  
**BT department**

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### Department of Biotechnology

#### Certification Program on "Plant Tissue Culture Techniques"

#### Academic Year 2018-19

#### Students Enrollment

| Sl.No. | USN        | Student Name          |
|--------|------------|-----------------------|
| 1      | 1SG16BT001 | AKANSHA CHAUHAN       |
| 2      | 1SG16BT002 | AMBIKA                |
| 3      | 1SG16BT003 | ANANYA.N.NAYAK        |
| 4      | 1SG16BT004 | BI BI AYESHA          |
| 5      | 1SG16BT005 | C.SUSHMITHA           |
| 6      | 1SG16BT006 | CHAITRA.M             |
| 7      | 1SG16BT007 | CHARISHMA.C.GOWDA     |
| 8      | 1SG16BT009 | DHEERAJ REDDY.B.N     |
| 9      | 1SG16BT010 | GURUPRASAD.K.G        |
| 10     | 1SG16BT011 | HEMA.H                |
| 11     | 1SG16BT012 | HEMA.J.N              |
| 12     | 1SG16BT013 | HEMANTH               |
| 13     | 1SG16B0014 | JEEVITHA.D            |
| 14     | 1SG16BT015 | LAKSHITHA W N         |
| 15     | 1SG16BT017 | LAVANYA.B             |
| 16     | 1SG16BT018 | M.YASHWANTH           |
| 17     | 1SG16BT019 | MAHIMA M SIDDHESHWAR  |
| 18     | 1SG16BT020 | MAYURI                |
| 19     | 1SG16BT022 | NAFISATHUL MISRIYA.A  |
| 20     | 1SG16BT023 | NAYANA.K.N            |
| 21     | 1SG16BT024 | NETHRAVATHI.M.G       |
| 22     | 1SG16BT025 | NIDHI.K.V             |
| 23     | 1SG16BT026 | NIKITHA.S             |
| 24     | 1SG16BT027 | POOJA.P               |
| 25     | 1SG16BT029 | PRAJWAL.M             |
| 26     | 1SG16BT030 | PRAJWAL.V.S           |
| 27     | 1SG16BT031 | PRIYANKA.M            |
| 28     | 1SG16BT032 | PRIYANKA VASUDEV      |
| 29     | 1SG16BT033 | RABBANA SOUDAGAR      |
| 30     | 1SG16BT034 | RAMYASHREE.S.J        |
| 31     | 1SG16BT035 | REACHIKAA RAJESWARI.S |
| 32     | 1SG16BT036 | SABA ANJUM            |
| 33     | 1SG16BT037 | SAI PADMASHREE        |
| 34     | 1SG16BT038 | SHREEMASHREE.K.P      |
| 35     | 1SG16BT039 | SHWETA                |

Principal

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## Department of Biotechnology

|    |            |                      |
|----|------------|----------------------|
| 36 | 1SG16BT040 | SIRISHA.J            |
| 37 | 1SG16BT041 | SUPRITHA.R           |
| 38 | 1SG16BT042 | SWASTIK SOURJEET     |
| 39 | 1SG16BT043 | VARSHA.B.S           |
| 40 | 1SG16BT044 | VINAY.B.S            |
| 41 | 1SG15BT001 | ABHISHEK.E           |
| 42 | 1SG15BT002 | AKSHATHA .G          |
| 43 | 1SG15BT003 | B.VARSHINI           |
| 44 | 1SG15BT004 | BHAGYALAKSHMI.K.S    |
| 45 | 1SG15BT006 | DEBIKA CHAKRABARTY   |
| 46 | 1SG15BT008 | DISHA D B            |
| 47 | 1SG15BT009 | DISHA PRABHU         |
| 48 | 1SG15BT010 | GOUTHAMI.B.L         |
| 49 | 1SG15BT011 | HARSHITHA H.C        |
| 50 | 1SG15BT012 | HARSHITHA S A        |
| 51 | 1SG15BT013 | HARSHITHA.G          |
| 52 | 1SG15BT014 | JAGANNATH .J         |
| 53 | 1SG15BT015 | KARTHIK.G            |
| 54 | 1SG15BT016 | KEERTHANA N          |
| 55 | 1SG15BT017 | KIRANA SHUBHASRI.R   |
| 56 | 1SG15BT018 | NIHARIKA.N           |
| 57 | 1SG15BT019 | PAVITHRA.K.S         |
| 58 | 1SG15BT020 | PREM SAGAR FERNANDES |
| 59 | 1SG15BT021 | PRIYANKA P           |
| 60 | 1SG15BT022 | PRIYANKA R           |
| 61 | 1SG15BT023 | R S AKASH            |
| 62 | 1SG15BT024 | RAMYASHREE M B       |
| 63 | 1SG15BT025 | REVATHY H            |
| 64 | 1SG15BT026 | SAHANA N M           |
| 65 | 1SG15BT027 | SAHANA.R             |
| 66 | 1SG15BT028 | SHRUTHEE KANNAN      |
| 67 | 1SG15BT029 | SINDHOORA RAO B      |
| 68 | 1SG15BT031 | SRILEKHA K           |
| 69 | 1SG15BT032 | SUSHMITHA R          |
| 70 | 1SG15BT033 | USHA S RAMU          |
| 71 | 1SG15BT034 | VIBHA BHARDWAJ       |
| 72 | 1SG15BT035 | VINEETHA M           |

  
COORDINATOR

  
Principal

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Main Road  
Bangalore-560057

  
Head of the Department  
Dept. of Bio-Technology  
Sapthagiri College of Engineering  
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Bangalore -57



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## Department of Biotechnology

### Certification Course on "Plant tissue Culture Techniques"

#### Attendance

| Sl No. | USN        | Student Name         | 9/7/18 |    | 10/7/18 |    | 11/7/2018 |    | 12/7/18 |    | 13/7/18 |    | 14/7/18 |    |
|--------|------------|----------------------|--------|----|---------|----|-----------|----|---------|----|---------|----|---------|----|
|        |            |                      | MS     | AS | MS      | AS | MS        | AS | MS      | AS | MS      | AS | MS      | AS |
| 1      | ISG16BT001 | AKANSHA CHAUHAN      | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 2      | ISG16BT002 | AMBIKA               | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 3      | ISG16BT003 | ANANYA.N.NAYAK       | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 4      | ISG16BT004 | BI BI AYESHA         | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 5      | ISG16BT005 | C.SUSHMITHA          | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 6      | ISG16BT006 | CHAITRA.M            | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 7      | ISG16BT007 | CHARISHMA.C.GOWDA    | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 8      | ISG16BT009 | DHEERAJ REDDY.B.N    | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 9      | ISG16BT010 | GURUPRASAD.K.G       | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 10     | ISG16BT011 | HEMA.H               | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 11     | ISG16BT012 | HEMA.J.N             | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 12     | ISG16BT013 | HEMANT.H             | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 13     | ISG16B0014 | JEEVITHA.D           | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 14     | ISG16BT015 | LAKSHITHA W.N        | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 15     | ISG16BT017 | LAVANYA.B            | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 16     | ISG16BT018 | M.YASHWANTH          | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 17     | ISG16BT019 | MAHIMA SIDDHESHWAR M | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 18     | ISG16BT020 | MAYURI               | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 19     | ISG16BT022 | NAFISATHUL MISRIYA.A | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 20     | ISG16BT023 | NAYANA.K.N           | 1      | 2  | 3       | 4  | 5         | 6  | 7       | 8  | 9       | 10 | 11      | 12 |

Principal

Sapthagiri College of Engineering  
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Head of the Department  
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## Department of Biotechnology

| Sl No. | USN        | Student Name         | 15/7/18 |    | 16/7/18 |    | 17/7/18 |    | 18/7/18 |    | 19/7/18 |    | 20/7/18 |    | 21/7/18 |    |
|--------|------------|----------------------|---------|----|---------|----|---------|----|---------|----|---------|----|---------|----|---------|----|
|        |            |                      | MS      | AS | MS      | AS | MS      | AS | MS      | AS | MS      | AS | MS      | AS | MS      | AS |
| 1      | ISG16BT001 | AKANSHA CHAUHAN      | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 2      | ISG16BT002 | AMBIKA               | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 3      | ISG16BT003 | ANANYA N. NAYAK      | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 4      | ISG16BT004 | BI BI AYESHA         | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 5      | ISG16BT005 | C.SUSHMITA           | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 6      | ISG16BT006 | CHAITRA M            | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 7      | ISG16BT007 | CHARISHMA C.GOWDA    | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 8      | ISG16BT009 | DHEERAJ REDDY B.N    | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 9      | ISG16BT010 | GURUPRASAD K.G       | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 10     | ISG16BT011 | HEMA H               | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 11     | ISG16BT012 | HEMA J.N             | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 12     | ISG16BT013 | HEMANTH              | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 13     | ISG16B0014 | JEEVITHA D           | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 14     | ISG16BT015 | LAKSHITHA W N        | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 15     | ISG16BT017 | LAVANYA B            | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 16     | ISG16BT018 | M.YASHWANTH          | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 17     | ISG16BT019 | MAHIMA SIDDHESHWAR M | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 18     | ISG16BT020 | MAYURI               | 13      | 14 | 15      | 16 | 16      | 17 | 18      | 19 | 20      | 21 | 22      | 23 | 24      | 25 |
| 19     | ISG16BT022 | NAFISATHUL MISRIYA A | 12      | 13 | 14      | 15 | 16      | 17 | 18      | 19 | 20      | 21 | 22      | 23 | 24      | 25 |
| 20     | ISG16BT023 | NAYANA K.N           | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |

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**Head of the Department**  
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## Department of Biotechnology

| Sl No. | USN        | Student Name         | 9/7/18 |    | 10/7/18 |    | 11/7/18 |    | 12/7/18 |    | 13/7/18 |    | 14/7/18 |    |
|--------|------------|----------------------|--------|----|---------|----|---------|----|---------|----|---------|----|---------|----|
|        |            |                      | MS     | AS | MS      | AS | MS      | AS | MS      | AS | MS      | AS | MS      | AS |
| 21     | ISG16BT024 | NETHRAVATHI.M.G      | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 22     | ISG16BT025 | NIDHI.K.V            | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 23     | ISG16BT026 | NIKITHA.S            | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 24     | ISG16BT027 | POOJA.P              | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 25     | ISG16BT029 | PRAJWAL.M            | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 26     | ISG16BT030 | PRAJWAL.V.S          | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 27     | ISG16BT031 | PRIYANKA.M           | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 28     | ISG16BT032 | PRIYANKA VASUDEV     | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 29     | ISG16BT033 | RABBANA SOUDAGAR     | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 30     | ISG16BT034 | RAMYASHREE.S.J       | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 31     | ISG16BT035 | REACH KAA RAJESWARIS | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 32     | ISG16BT036 | SABA ANJUM           | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 33     | ISG16BT037 | SAI PADMAHSHREE      | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 34     | ISG16BT038 | SHREEMASHREE.K.P     | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 35     | ISG16BT039 | SHWETA               | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 36     | ISG16BT040 | SIRISHAJ             | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 10      | 1  |
| 37     | ISG16BT041 | SUPRITHA.R           | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 38     | ISG16BT042 | SWASTIK SOURJEET     | 2      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 39     | ISG16BT043 | VARSHA.B.S           | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 40     | ISG16BT044 | VINAY.B.S            | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 41     | ISG15BT001 | ABHISHEK.E           | 1      | 2  | 3       | 4  | 5       | 5  | 6       | 7  | 8       | 9  | 10      | 11 |
| 42     | ISG15BT002 | AKSHATHA.G           | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 43     | ISG15BT003 | B.VARSHINI           | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 44     | ISG15BT004 | BHAGYALAKSHMI.K.S    | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 45     | ISG15BT006 | DEBIKA CHAKRABARTY   | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |
| 46     | ISG15BT008 | DISHA D B            | 1      | 2  | 3       | 4  | 5       | 6  | 7       | 8  | 9       | 10 | 11      | 12 |

*Principal*  
Sapthagiri College of Engineering  
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*Head of the Department*  
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## Department of Biotechnology

| SI No. | USN        | Student Name         | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|--------|------------|----------------------|----|----|----|----|----|----|----|----|----|----|----|----|
|        |            |                      | M  | AS | MS | AS | MS | AS | MS | AS | MS | AS | MS | AS |
| 21     | ISG16BT024 | NETHRAVATH.M.G       | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 22     | ISG16BT025 | NIDHI.K.V            | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 23     | ISG16BT026 | NIKITHA.S            | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 24     | ISG16BT027 | POOJA.P              | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25     | ISG16BT029 | PRAJWAL.M            | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 26     | ISG16BT030 | PRAJWAL.V.S          | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 27     | ISG16BT031 | PRIYANKA.M           | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 28     | ISG16BT032 | PRIYANKA VASUDEV     | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 29     | ISG16BT033 | RABBANA SOUDAGAE     | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 30     | ISG16BT034 | RAMYASHREE.S.J       | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 31     | ISG16BT035 | REACHIKAA RAJESWARIS | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 32     | ISG16BT036 | SABA ANJUM           | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 33     | ISG16BT037 | SAI PADMASHREE       | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 34     | ISG16BT038 | SHREEMASHREE.K.P     | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 35     | ISG16BT039 | SHWETA               | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 36     | ISG16BT040 | SIRISHA.J            | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 37     | ISG16BT041 | SUPRITHA.R           | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 38     | ISG16BT042 | SWASTIK SOURJEET     | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 39     | ISG16BT043 | VARSHA.B.S           | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 40     | ISG16BT044 | VINAY.B.S            | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 41     | ISG15BT001 | ABHISHEK.E           | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 42     | ISG15BT002 | AKSHATHA.G           | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 43     | ISG15BT003 | B.VARSHINI           | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 44     | ISG15BT004 | BHAGYALAKSHMI.K.S    | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 45     | ISG15BT006 | DEBIKA CHAKRABARTY   | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 46     | ISG15BT008 | DISHA D E            | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

Principal

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## Department of Biotechnology

| Sl No. | USN        | Student Name            | 09/7/18 | 10/7/18 | 11/7/18 | 12/7/18 | 13/7/18 | 14/7/18 | 15/7/18 |    |    |    |    |    |    |    |
|--------|------------|-------------------------|---------|---------|---------|---------|---------|---------|---------|----|----|----|----|----|----|----|
|        |            |                         | M<br>S  | AS      | MS      | AS      | MS      | AS      | MS      | AS | MS | AS | MS | AS |    |    |
| 48     | ISG15BT010 | GOUTHAMI.B.L            | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 49     | ISG15BT011 | HARSHITHA H.C           | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 50     | ISG15BT012 | HARSHITHA S.A           | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 51     | ISG15BT013 | HARSHITHA.G             | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 52     | ISG15BT014 | JACANNATH J             | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 53     | ISG15BT015 | KARTHIK.G               | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 54     | ISG15BT016 | KEERTHANA N             | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 55     | ISG15BT017 | KIRANA<br>SHUBHASRI.R   | 1       | 2       | 3       | 3       | 4       | 5       | 6       | 7  | 8  | 9  | 10 | 11 | 12 | 13 |
| 56     | ISG15BT018 | NIHARIKA.N              | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 57     | ISG15BT019 | PAVITHRA.K.S            | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 58     | ISG15BT020 | PREM SAGAR<br>FERNANDES | 1       | 2       | 3       | 4       | 5       | 6       | 6       | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 59     | ISG15BT021 | PRIYANKA P              | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 60     | ISG15BT022 | PRIYANKA R              | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 61     | ISG15BT023 | R.S. AKASH              | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 62     | ISG15BT024 | RAMYASHREE M.B          | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 63     | ISG15BT025 | REVATHY H               | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 64     | ISG15BT026 | SAHANA N.M              | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 65     | ISG15BT027 | SAHANA.R                | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 66     | ISG15BT028 | SHRUTHEE KANNAN         | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 7  | 8  | 9  | 10 | 11 | 12 | 13 |
| 67     | ISG15BT029 | SINDHOORA RAO B         | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 68     | ISG15BT031 | SRILEKHA K              | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 69     | ISG15BT032 | SUSHMITHA R             | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 70     | ISG15BT033 | USHA S RAMU             | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 71     | ISG15BT034 | VIBHA BHARDWAJ          | 1       | 2       | 3       | 3       | 4       | 5       | 6       | 7  | 8  | 9  | 10 | 11 | 12 | 13 |
| 72     | ISG15BT035 | VINEETHA M              | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8  | 9  | 10 | 11 | 12 | 13 | 14 |

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## Department of Biotechnology

| Sl No. | USN        | Student Name         | 16/7/18 |    | 17/7/18 |    | 18/7/18 |    | 19/7/18 |    | 20/7/18 |    | 21/7/18 |    |
|--------|------------|----------------------|---------|----|---------|----|---------|----|---------|----|---------|----|---------|----|
|        |            |                      | MS      | AS | MS      | AS | MS      | AS | MS      | AS | MS      | AS | MS      | AS |
| 43     | ISG15BT010 | GOUTHAMI.B.L         | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 49     | ISG15BT011 | HARSHITHA H.C        | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 50     | ISG15BT012 | HARSHITHA S.A        | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
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| 54     | ISG15BT016 | KEERTHANA.N          | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
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| 58     | ISG15BT020 | PREM FERNANDES SAGAR | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 |
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| 60     | ISG15BT022 | PRIYANKA.R           | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 |
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| 63     | ISG15BT025 | REVATHY.H            | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 |
| 64     | ISG15BT026 | SAHANA.N.M           | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 |
| 65     | ISG15BT027 | SAHANA.R             | 13      | 14 | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 |
| 66     | ISG15BT028 | SHRUTHEE.KANNAN      | 14      | 15 | 16      | 17 | 18      | 19 | 20      | 21 | 22      | 23 | 24      | 25 |
| 67     | ISG15BT029 | SINDHOORA.RAO.B      | 14      | 15 | 16      | 17 | 18      | 19 | 20      | 21 | 22      | 23 | 24      | 25 |
| 68     | ISG15BT031 | SRILEKHA.K           | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 69     | ISG15BT032 | SUSHMITHA.R          | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 70     | ISG15BT033 | USHA.S.RAMU          | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |
| 71     | ISG15BT034 | VIBHA.BEARDWAJ       | 14      | 15 | 16      | 17 | 18      | 19 | 20      | 21 | 22      | 23 | 24      | 25 |
| 72     | ISG15BT035 | VINEETHA.M           | 15      | 16 | 17      | 18 | 19      | 20 | 21      | 22 | 23      | 24 | 25      | 26 |

COORDINATOR

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### Department of Biotechnology

#### Two Weeks Certification Course on "Plant Tissue Culture Techniques"

##### Test Time Table

| Sl. No. | DATE      | DAY      | TIMINGS           |
|---------|-----------|----------|-------------------|
| 1       | 21/7/2018 | Saturday | 3.45 pm - 4:45 pm |

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**HOD**

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### CERTIFICATE COURSE ON PLANT TISSUE CULTURE TECHNIQUES

#### QUESTION PAPER

**Date:** 21/7/2018

**Duration:** 1hr

**Maximum marks:** 25

**Note:** Question number 1-15 (1M each)

Question number 16-20 (2M each)

1. DMSO (Dimethyl sulfoxide) is used as  
a) Gelling agent b) alkylating agent c) Chelating agent d) Cry protectant
2. Part of plant used for culturing is called  
a) Scion b) Explant c) Stock d) Callus
3. Somaclonal variations are the ones  
a) Caused by mutagens b) Produce during tissue culture c) Caused by gamma rays  
d) Induced during sexual embryogeny
4. Which of the following plant cell will show totipotency?  
a) Xylem vessels b) Sieve tube c) Meristem d) Cork cells
5. Growth hormone producing apical dominance is  
a) Auxin b) Gibberellin c) Ethylene d) Cytokinin
6. The most widely used chemical for protoplast fusion, as fusogens, is  
a) Mannitol b) Sorbitol c) Mannol d) Poly ethylene glycol (PEG)

  
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7. Synthetic seed is produced by encapsulating somatic embryo with  
a) sodium chloride b) sodium alginate c) sodium acetate d) sodium nitrate
8. Callus is  
a) Tissue that forms embryo b) An insoluble carbohydrate c) Tissue that grows to form embryoid d) Unorganized actively dividing mass of cells maintained in cultured
9. A medium which is composed of chemically defined compound is called  
a) Natural media b) Synthetic media c) Artificial media d) None of these
10. To obtain haploid plant, we culture  
a) Entire anther b) Nucleus c) Embryo d) Apical bud
11. Who is the father of tissue culture?  
a) Bonner b) Haberlandt c) Laibach d) Gautheret
12. Which vector is mostly used in crop improvement?  
a) Plasmid b) Cosmid c) Phasmid d) Agrobacterium
13. The production of secondary metabolites require the use of  
a) protoplast b) cell suspension c) meristem d) auxillary buds
14. Cybrids are produced by  
a) Fusion of two different nuclei from two different species b) Fusion of two same nuclei from same species c) Nucleus of one species but cytoplasm from both the parent species d) none of the above.



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### Department of Biotechnology

15. Which of the following plant cell will show totipotency?

a) Xylem vessels b) Sieve tube c) Meristem d) Cork cells

16. Write the importance of plant tissue culture.


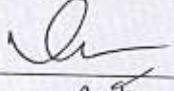




17. What are the types of tissue culture?

18. What are Technique for Plant in Vitro Culture

19. What is Process of Plant Tissue Culture?

20. Major Steps of Tissue Culture

Approved by Academic Committee members and Guest speaker:

| Sl. NO. | Faculty member           | Designation                  | Signature   |
|---------|--------------------------|------------------------------|---|
| 1       | Dr.Rehit K C             | HOD                          |  |
| 2       | Dr.Veena S More          | Professor                    |  |
| 3       | Prof.Prashanth Kumar H P | Assistant Professor          |  |
| 4       | Prof.Soumya C            | Assistant Professor          |  |
| 5       | Prof.Shobha G            | Assistant Professor          |  |
| 6       | Mr. Rohit Raj            | Managing Partner, Chlorobios |  |

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### Two weeks Certification Course on "Plant Tissue Culture Techniques"

#### Solutions for the Questions

Duration: 1hr

Maximum marks: 25

|   |           |          |
|---|-----------|----------|
| 1 | Answer 1: | Option B |
| 2 | Answer 2: | Option B |
| 3 | Answer 3: | Option D |
| 4 | Answer 4: | Option C |
| 5 | Answer 5: | Option A |
| 6 | Answer 6: | Option D |
| 7 | Answer 7: | Option B |

|    |            |          |
|----|------------|----------|
| 8  | Answer 8:  | Option D |
| 9  | Answer 9:  | Option B |
| 10 | Answer 10: | Option A |
| 11 | Answer 11: | Option B |
| 12 | Answer 12: | Option D |
| 13 | Answer 13: | Option B |
| 14 | Answer 14: | Option C |
| 15 | Answer 15: | Option B |

16. In a relatively short time and space a large number of plantlets can be produced starting from the single explant. → Taking an explant does not usually destroy the mother plant, so rare and endangered plants can be cloned safely. → It is easy to select desirable traits directly from the culture setup (in vitro) thereby decreasing the amount of space required, for field trials. → Once established, a plant tissue culture line can give a continuous supply of young plants throughout the year.

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**17. Callus culture:** Callus culture may be defined as production and maintenance of an unorganized mass of proliferative cell from isolated plant cell, tissue or organ by growing them on artificial nutrient medium in glass vials under controlled aseptic conditions.

**Organ culture:** That may allow differentiation and preservation of the architecture. The organ culture refers to the in vitro culture and maintenance of an excised organ primordial or whole or part of an organ in way and function.

**Single cell culture:** Single cell culture is a method of growing isolated single cell aseptically on nutrient medium under controlled condition.

**18. Micro propagation -** This technique is used for the purposes of developing high- quality clonal plants (a clone is a group of identical cells). This has the potential to provide rapid and large scale propagation of new genotypes.

**Somatic cell genetics -** Used for haploid production and somatic hybridization

**Transgenic plants -** Used for expression of mammalian genes or plant genes for various species it has proved beneficial for the engineering of species that are resistant against viruses and insects.

**19.** This process involves the use of small pieces of a given plant tissue (plant of interest). Once the tissue is obtained, it is then cultured in the appropriate medium under sterile conditions so as to prevent various types of microorganisms from affecting the process.

### 20. Initiation Phase (Stage 1)

The initiation phase is the first phase of tissue culture. Here, the tissue of interest is obtained and introduced and sterilized in order to prevent any microorganism from negatively affecting the process. It is during this stage that the tissue is initiated in to culture.

### Multiplication Phase (Stage 2)

The multiplication phase is the second step of tissue culture where the in vitro plant material is re-divided and then introduced in to the medium. Here, the medium is composed of appropriate components for growth including regulators and nutrients. These are responsible for the proliferation of the tissue and the production of multiple shoots.



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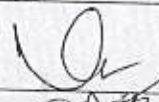
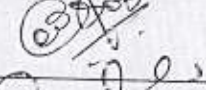



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## Department of Biotechnology

### Root formation (Stage 3)

It is at this phase that roots are formed. Here, hormones are required in order to induce rooting, and consequently complete plantlets.

### Scheme and Solutions approved by Academic Committee members:

| Sl. NO. | Faculty members     | Designation                 | Signature   |
|---------|---------------------|-----------------------------|---|
| 1       | Dr.Rohit K C        | HOD                         |    |
| 2       | Dr.Veena S More     | Professor                   |    |
| 3       | Prashanth Kumar H P | Assistant Professor         |   |
| 4       | Soumya C            | Assistant Professor         |  |
| 5       | Shobha G            | Assistant Professor         |  |
| 6       | Mr. Rohith Raj      | Managing Partner, Chlorbios |  |

  
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## Department of Biotechnology

### Certification Course on "Plant Tissue Culture Techniques"

#### Participant Feedback

1. How was the overall organization of the Certification Course?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
2. How appropriate were the facilities provided?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
3. Opportunity to ask questions for clarification and interaction with presenters  
a) Poor b) Satisfactory c) ☒ Good d) Excellent
4. Effectiveness of the Hands-on Sessions  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
5. Topic and contents of the Certification Course  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
6. How do you rate the Certification Course compared to other workshops that you have attended?  
a) Poor b) Satisfactory c) ☒ Good d) Excellent
7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory c) ☒ Good d) Excellent
8. Any Suggestions:

Student Name: Chaitra M

Student Signature: Chaitra M

  
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a) Poor b) Satisfactory c) Good ☒ d) Excellent
6. How do you rate the Certification Course compared to other workshops that you have attended?  
a) Poor b) Satisfactory c) ☒ Good d) Excellent
7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory ☒ c) Good d) Excellent
8. Any Suggestions:

Student Name: Sri padmasree

Student Signature: *[Signature]*

Principal

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057





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Phone: 080-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

## Department of Biotechnology

### Certification Course on "Plant Tissue Culture Techniques"

#### Participant Feedback

1. How was the overall organization of the Certification Course?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
2. How appropriate were the facilities provided?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
3. Opportunity to ask questions for clarification and interaction with presenters  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
4. Effectiveness of the Hands-on Sessions  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
5. Topic and contents of the Certification Course  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
6. How do you rate the Certification Course compared to other workshops that you have attended?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
8. Any Suggestions:

Student Name: Saba Arjun

Student Signature:

Saba Arjun

Principal

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057



### Certification Course on "Plant Tissue Culture Techniques"

#### Participant Feedback

1. How was the overall organization of the Certification Course?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
2. How appropriate were the facilities provided?  
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6. How do you rate the Certification Course compared to other workshops that you have attended?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
8. Any Suggestions:

*More Practical session are required*

Student Name: *Revathy A*

Student Signature: *Revathy A*

*Principal*  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057



### Certification Course on "Plant Tissue Culture Techniques"

#### Participant Feedback

1. How was the overall organization of the Certification Course?  
a) Poor b) Satisfactory c) Good d) Excellent
2. How appropriate were the facilities provided?  
a) Poor b) Satisfactory c) Good d) Excellent
3. Opportunity to ask questions for clarification and interaction with presenters  
a) Poor b) Satisfactory c) Good d) Excellent
4. Effectiveness of the Hands-on Sessions  
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a) Poor b) Satisfactory c) Good d) Excellent
6. How do you rate the Certification Course compared to other workshops that you have attended?  
a) Poor b) Satisfactory c) Good d) Excellent
7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory c) Good d) Excellent
8. Any Suggestions:

Student Name:

*Subalax*

Student Signature:

*Subalax*

*Principal*  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057



### Certification Course on "Plant Tissue Culture Techniques"

#### Participant Feedback

1. How was the overall organization of the Certification Course?  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
2. How appropriate were the facilities provided?  
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3. Opportunity to ask questions for clarification and interaction with presenters  
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6. How do you rate the Certification Course compared to other workshops that you have attended?  
a) Poor b) Satisfactory ☒ c) Good d) Excellent
7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory c) Good ☒ d) Excellent
8. Any Suggestions:

extend the Practical session & duration.

Student Name: Jagannath J

Student Signature:

*Jagannath J*

*Principal*  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057



# Sapthagiri College of Engineering

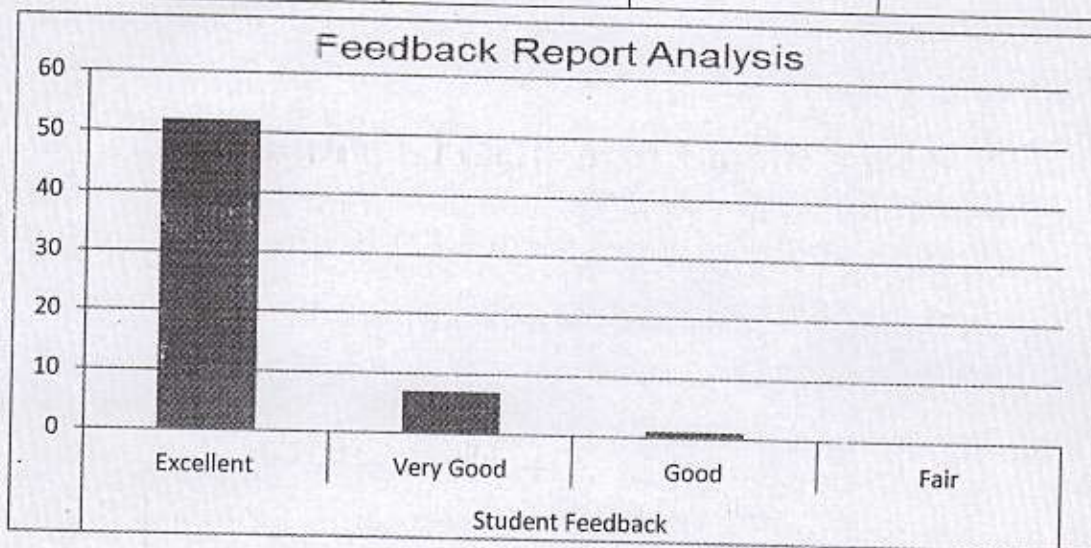
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## Department of Biotechnology

### FEEDBACK ANALYSIS

Certification Programme: "Plant Tissue Culture Techniques"

| No. of students participated | Student Feedback |           |      |      |
|------------------------------|------------------|-----------|------|------|
|                              | Excellent        | Very Good | Good | Fair |
| 60                           | 52               | 7         | 1    | 0    |



#### Action Report:

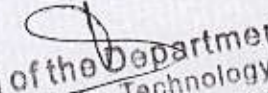
87 % of students were completely happy with the certification program and 12 % of students felt it was a good program and remaining 2 % students were satisfied with the program.

#### Action Taken:

The Feedback report which was collected from the students were sent to the principal and he would take necessary actions based on the comments and conduct more programs for the benefit of students.

  
Program Coordinator

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057

  
Head of the Department  
Dept. of Bio-Technology  
Sapthagiri College of Engineering  
No. 14/5, Chikkasandra  
Hesaraghatta Main Road  
Bangalore -57



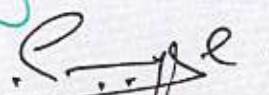
**CERTIFICATE COURSE  
ON  
PLANT TISSUE CULTURE TECHNIQUES**





**This is to certify that**


Mr./Ms. NIHARIKA. N

Of V/VII semester Biotechnology has successfully completed  
“*PLANT TISSUE CULTURE TECHNIQUES*” organized by  
Department of Biotechnology, Sapthagiri College of Engineering,  
Bengaluru-57 and CHLORBIOS PVT LTD, Bengaluru-560106 from  
9<sup>TH</sup> July 2018 TO 21<sup>st</sup> July 2018.

  
Chief Coordinator  
PTC course

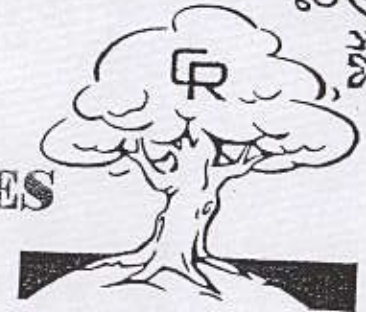
  
Head  
Department of BT

  
Managing Partner  
CHLORBIOS PVT LTD

  
Principal  
SCE



**CERTIFICATE COURSE  
ON  
PLANT TISSUE CULTURE TECHNIQUES**

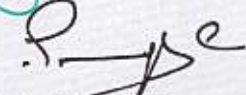


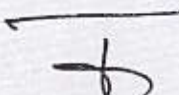
**This is to certify that**

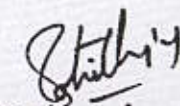
Mr./Ms.. ....HEMA..H.....

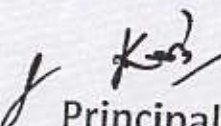
Of V/VII semester Biotechnology has successfully completed  
“PLANT TISSUE CULTURE TECHNIQUES” organized by  
Department of Biotechnology, Sapthagiri College of Engineering,  
Bengaluru-57 and CHLORBIOS PVT LTD, Bengaluru-560106 from

9<sup>TH</sup> July 2018 TO 21<sup>ST</sup> July 2018.

  
Chief Coordinator  
PTC course

  
Head  
Department of BT

  
Managing Partner  
CHLORBIOS PVT LTD

  
Principal  
SCE

Sapthagiri College of Engineering  
Chikkaanda, Heeraghatta Road,  
Bengaluru-560053





**CERTIFICATE COURSE  
ON  
PLANT TISSUE CULTURE TECHNIQUES**



**This is to certify that**

Mr./Ms.. AMBKA


Of V/VII semester Biotechnology has successfully completed


*"PLANT TISSUE CULTURE TECHNIQUES"* organized by

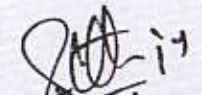
Department of Biotechnology, Sapthagiri College of Engineering,

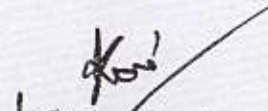
Bengaluru-57 and CHLORBIOS PVT LTD, Bengaluru-560106 from

9<sup>TH</sup> July 2018 TO 21<sup>st</sup> July 2018.

  
Chief Coordinator  
PTC course

  
Head  
Department of BT

  
Managing Partner  
CHLORBIOS PVT LTD

  
Principal  
SCE





**CERTIFICATE COURSE  
ON  
PLANT TISSUE CULTURE TECHNIQUES**



**This is to certify that**

**Mr./Ms. ....**

**Of V/VII semester Biotechnology has successfully completed  
“PLANT TISSUE CULTURE TECHNIQUES” organized by  
Department of Biotechnology, Sapthagiri College of Engineering,  
Bengaluru-57 and CHLORBIOS PVT LTD, Bengaluru-560106 from  
9<sup>TH</sup> July 2018 TO 21<sup>st</sup> July 2018.**

**Chief Coordinator  
PTC course**

**Head  
Department of BT**

**Managing Partner  
CHLORBIOS PVT LTD**

**Principal  
SCE**

*Sapthagiri College of Engineering  
Chikkaenda, Hosuraghatta Road  
Bengaluru-560 057*  
**Principal**



### Certificate Course -Plant Tissue Culture Techniques

#### Post Event Report

Department of BT conducted Certificate Course on Plant Tissue Culture Techniques from 9<sup>th</sup> July 2018 to 21<sup>st</sup> July 2018

**Objective of the Course:** The two weeks course made the students to be familiar with the major concepts in plant tissue culture techniques which is a main platform for their career. Certificate Course became the vital step to improve the knowledge of students.

**Resource Person:** Mr.Rohith Raj, Managing Partner, Chlorbios Pvt.Ltd. Yalaharka Bangalore.

**Duration of the course:** Two Weeks from 9<sup>th</sup> July 2018 to 21<sup>st</sup> July 2018



Student Participants in certification Program



Guest speaker Mr.Rohith Raj delivering a Lecture on Plant Tissue culture Techniques

*Principal*  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057





**Distribution of Certificates to the student participants**

| Dates     | Report  |
|-----------|---|
| 9-7-2018  | Speaker delivered a talk on Techniques in Plant Tissue culture.   |
| 10-7-2018 | Speaker delivered a talk on Media Optimization, Callus culture and hands on session on Hands on Media Preparations                    |
| 11-7-2018 | Speaker delivered a talk on Organogenesis and hands on session on inoculation explants aseptically                                    |
| 12-7-2018 | Speaker delivered a talk on Suspension Culture, Types of suspension Culture and Hands on session on preparation of suspension culture |
| 13-7-2018 | Speaker delivered a talk on Measurement of growth of cultures, Secondary metabolites in plant culture                                 |
| 14-7-2018 | Delivered a talk on Protoplast culture, Method of production of protoplast culture  |
| 15-7-2018 | Speaker delivered a talk on Application of Protoplast culture, Hands on session on Isolation of Protoplast and its fusion             |
| 16-7-2018 | Hands on session Isolation of Protoplast and its fusion   |
| 17-7-2018 | Speaker delivered a talk on Crop development through Anther Culture, Method of production of anther culture                           |

*[Signature]*  
Principal  
Sapthagiri College of Engineering  
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## Department of Biotechnology

|            |  |
|------------|--|
| 18-07-2018 | Speaker delivered a talk on Application of anther Culture ,Hands on session on pretreatment of anthers and media optimization for Anther culture |
| 19-07-2018 | Hands on session on pretreatment of anthers and media optimization for Anther culture  |
| 20-07-2018 | Speaker delivered a talk on Cell viability measurement, Viability tests  |
| 21-07-2018 | Hands on session on viability of culture cells   |

Conclusion: A program of education resulting in a certificate of completion rather than a degree. These programs prepare students to complete a specific task or allow them proficiency in one of the particular aspect of their field. Students were benefit with practical skills on plant tissue culture techniques. Students pursue certificates in order to get ahead in the professional field of their interest. Faculty members were also equally benefited with this course

  
**HOD**  
Head of the Department  
Dept. of Bio - Technology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore -57

  
**Principal**  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057



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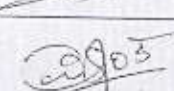


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## Department of Biotechnology

08-11-2018

### CIRCULAR

This is to inform that the following Curriculum Board members are requested to attend the meeting on 9/11/2018 at 10.30 AM in the HODs chamber to decide the syllabus and the lesson plan for the certification program on "Clinical Data Management".

| Sl NO. | Faculty members          | Designation         | Signature   |
|--------|--------------------------|---------------------|---|
| 1      | Dr.Rohit K C             | HOD                 |    |
| 2      | Dr.Veena S More          | Professor           |   |
| 3      | Prof.Prashanth Kumar H P | Assistant Professor |  |
| 4      | Prof.Soumya C            | Assistant Professor |  |
| 5      | Prof.Shobha G            | Assistant Professor |  |

Head of the Department  
Dept. of Bio-Technology  
Sapthagiri College  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore-56

Principal

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## Department of Biotechnology

Date: 08-11-2018

To,

Mr. Sachin & team  
Head of Clinical Operations  
Sapthagiri Clintrac Pvt Ltd  
Hesaraghatta Road  
Bangalore - 560057.

Respected Sir,

Subject: Invitation as a "Guest Speaker" in certification program and to attend meeting to discuss about the certification program

Department of Biotechnology has planned to conduct a certification program titled "Clinical Data Management" for 2<sup>nd</sup> and 4<sup>th</sup> Semester students from 21<sup>st</sup> January 2019 to 28<sup>th</sup> January 2019. In this connection, we are privileged to invite you as a guest speaker on the above mentioned topic.

Thanking you for your kind acceptance to our request on phone. We request you to attend the meeting to discuss about the conduction of certification course on 9/11/2018 at 10.30 AM. We look forward to welcome you at SCE.

Thanking you

Yours faithfully,  
Head of the Department  
Dept. of Bio-Technology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore - 57

Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057



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## Department of Biotechnology

### Minutes of Meeting

A meeting was conducted on 9-Nov-2019 in BT HoD's Chamber to discuss and approve the following about the one week Certification Course for 2<sup>nd</sup> and 4<sup>th</sup> Semester BT Students.

- **Course Title :** Clinical Data Management
- **Resource Personnel:** Mr.Sachin Head of Clinical operations,Sapthagiri Clintrac Pvt. Ltd. Bangalore
- **Course Duration & Date:** 21<sup>st</sup> January 2019 to 28<sup>th</sup> January 2019

### Syllabus and schedule of the certification program

| Date       | Time                | Topics  |
|------------|---------------------|---|
| 21/01/2019 | 8:30 AM - 10:30 AM  | Introduction, Clinical Data Management plan, Database design consideration                  |
|            | 10:30 AM – 12:30 PM | Data cleaning issues ,Data processing issue   |
|            | 1:30PM – 4:30PM     | Hands on session on Data Entry and Data Cleaning. Pre-requisites for Site Data Entry.       |
| 22/01/2019 | 8:30 AM - 10:30 AM  | Operating procedures for database design  |
|            | 10:30 AM – 12:30 PM | Dealing with problem data, Modifying data   |
|            | 1:30PM – 4:30PM     | Hands on session on Entering Data, Data Entry Completion, session Guidelines Data Security. |
| 23/01/2019 | 8:30 AM - 10:30 AM  | Quality control through database audits   |
|            | 10:30 AM – 12:30 PM | Identifying and managing discrepancies ,Quality control and assurance                       |
|            | 1:30PM – 4:30PM     | Quality Control Procedures, Hands on session on Query Generation                            |
| 24/01/2019 | 8:30 AM - 10:30AM   | Managing laboratory data, Storing lab data  |
|            | 10:30 AM – 12:30 AM | Creating report ,Report transferring  |
|            | 1:30PM – 4:30PM     | Hands on session on Loading Electronic Files  |
| 25/01/2019 | 8:30 AM - 10:30 AM  | Electronic data capture system, System Validation   |
|            | 10:30 AM – 12:30PM  | Migrating, data integration and archiving data  |
|            | 1:30PM – 4:30PM     | Hands on session on EDC Exported Database, Medical Coding.                                  |

*[Signature]*  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057








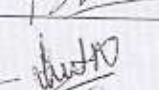
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## Department of Biotechnology

|            |                     |   |
|------------|---------------------|---|
| 28/01/2019 | 8:30 AM - 10:30 AM  | Data Normalization and Querying Techniques                |
|            | 10:30 AM - 12:30 PM | Data Mining for desired applications                      |
|            | 1:30PM - 4:30PM     | Quality Assurance Audit and Database Lock, Data Archiving |

The following members were present in the meeting and the syllabus and lesson plan for the certification program has been decided.

| Sl. NO. | Faculty members          | Designation         | Signature   |
|---------|--------------------------|---------------------|---|
| 1       | Dr.Rohit K C             | HOD                 |    |
| 2       | Dr.Veera S More          | Professor           |   |
| 3       | Prof.Prashanth Kumar H P | Assistant Professor |  |
| 4       | Prof.Soumya C            | Assistant Professor |  |
| 5       | Prof.Shobha G            | Assistant Professor |  |
| 6       | Mr.Sachin                | Guest speaker       |  |
| 7       | Mrs.Shruthi              | Guest speaker       |  |

Head of the Department  
Dept. of Biotechnology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
Bangalore - 57

Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
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## Department of Biotechnology

12/11/2018

### NOTICE

As a part of programming skill development Department of Information Science and Engineering is conducting Five days Certification Course on "Clinical Data Management" from 21<sup>st</sup> January 2019 to 28<sup>th</sup> January 2019. II and IV SEM BT students are informed to attend the course compulsorily.

Head of the Department  
Dent. of Biotechnology  
Sapthagiri College  
Hesaraghatta  
Bangalore-57

**Signature of HOD**  
**BT department**

Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057



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## Department of Biotechnology

### Certification Program on "Clinical Data Management"

#### Academic Year 2018-19

#### Students Enrollment

| Sl.No. | USN        | Student Name     |
|--------|------------|------------------|
| 1      | 1SG17BT001 | ABHINAV BANARJI  |
| 2      | 1SG17BT002 | ADITI KASHYAP    |
| 3      | 1SG17BT003 | AMBIKA R         |
| 4      | 1SG17BT004 | ANAGHA SHESHADRI |
| 5      | 1SG17BT005 | ANJALI R         |
| 6      | 1SG17BT007 | B M KARTHIK      |
| 7      | 1SG17BT008 | BHOOMIKA G       |
| 8      | 1SG17BT009 | BHUVANESHWARI G  |
| 9      | 1SG17BT010 | D S NEHA         |
| 10     | 1SG17BT011 | DEEPIKA G        |
| 11     | 1SG17BT012 | DIVYA D ANAND    |
| 12     | 1SG17BT014 | HARSHITHA J Y    |
| 13     | 1SG17BT015 | KUHELI BHOWMICK  |
| 14     | 1SG17BT016 | MANIKUMAR R      |
| 15     | 1SG17BT017 | KIRAN KUMAR N    |
| 16     | 1SG17BT018 | NITHYASHREE S    |
| 17     | 1SG17BT019 | PRAKRUTHI M R    |
| 18     | 1SG17BT020 | PRATHIMA H S     |
| 19     | 1SG17BT021 | PRAVEEN P        |
| 20     | 1SG17BT022 | PRIYADARSHINI M  |
| 21     | 1SG17BT024 | RAKSHITHA A      |
| 22     | 1SG17BT025 | RASHMI T S       |
| 23     | 1SG17BT026 | RIDA TABASSUM    |
| 24     | 1SG17BT027 | RUMAISA FATIMA   |
| 25     | 1SG17BT028 | SANCHIT S YADAV  |
| 26     | 1SG17BT030 | SANGEETHA R      |
| 27     | 1SG17BT031 | SHASHIKALA S     |

*Principal*  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057



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### Department of Biotechnology

|    |            |                      |
|----|------------|----------------------|
| 28 | 1SG17BT032 | SHWETHA S            |
| 29 | 1SG17BT033 | SOMNATH SINGH        |
| 30 | 1SG17BT034 | SONALI               |
| 31 | 1SG17BT035 | SHREELAKSHMI K       |
| 32 | 1SG17BT036 | SUPRAJA O D          |
| 33 | 1SG17BT037 | THANUSHREE M         |
| 34 | 1SG17BT038 | VINUTHA              |
| 35 | 1SG17BT039 | YASHASWINI S S       |
| 36 | 1SG17BT040 | YUKTHA R             |
| 37 | 1SG17BT041 | KIRAN KUMAR M L      |
| 38 | 1SG16BT028 | POOJA S              |
| 39 | 1SG18BT001 | ABHINANDAN KANJIAR   |
| 40 | 1SG18BT002 | AMRUTHA S            |
| 41 | 1SG18BT003 | ANIKA ANJANA GOWDA   |
| 42 | 1SG18BT004 | ARCHANA S R          |
| 43 | 1SG18BT005 | ARUNA MOHAN          |
| 44 | 1SG18BT006 | AVISHKA SARIKA GOWDA |
| 45 | 1SG18BT007 | AVINASH K G          |
| 46 | 1SG18BT008 | BENITA S ROBIN       |
| 47 | 1SG18BT009 | BHAGYASHREE R        |
| 48 | 1SG18BT010 | BHARGAVI KRISHNA     |
| 49 | 1SG18BT011 | BRAMARI S SHETTY     |
| 50 | 1SG18BT012 | CHAITRA U KABBUR     |
| 51 | 1SG18BT013 | CHAITRA V S          |
| 52 | 1SG18BT014 | CHANDRAMOULI S       |
| 53 | 1SG18BT016 | CHITTOJU PRERANA     |
| 54 | 1SG18BT017 | DEERAJ J             |
| 55 | 1SG18BT018 | DIKSHITHA S          |
| 56 | 1SG18BT019 | DIMPLE B H           |
| 57 | 1SG18BT020 | HARSHITHA P S        |
| 58 | 1SG18BT021 | KANCHANA B K         |
| 59 | 1SG18BT022 | KAUSHIK P M          |

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### Department of Biotechnology

|    |            |                            |
|----|------------|----------------------------|
| 60 | 1SG18BT023 | MONIKA N                   |
| 61 | 1SG18BT024 | MONISHA S                  |
| 62 | 1SG18BT025 | N VAMSHI PRIYA             |
| 63 | 1SG18BT026 | NANCY YADAV                |
| 64 | 1SG18BT027 | NAYANIKA AISHWARYA         |
| 65 | 1SG18BT028 | NISAR AHMED PARASAR        |
| 66 | 1SG18BT029 | NISARGA P                  |
| 67 | 1SG18BT030 | NISHA K                    |
| 68 | 1SG18BT031 | POOJA D L                  |
| 69 | 1SG18BT032 | POOJA R                    |
| 70 | 1SG18BT033 | POOJA S YADAV              |
| 71 | 1SG18BT034 | POOJA YELLAPPA KARLANNAVAR |
| 72 | 1SG18BT035 | PRAVEEN KUMAR T S          |
| 73 | 1SG18BT036 | PREETHI H K                |
| 74 | 1SG18BT037 | RACHANA G                  |
| 75 | 1SG18BT038 | R RAHUL                    |
| 76 | 1SG18BT039 | RUTHWIK K SHETTY           |
| 77 | 1SG18BT040 | SAHANA M                   |
| 78 | 1SG18BT041 | SAHANA SHEELI              |
| 79 | 1SG18BT042 | SANTHOSH G K               |
| 80 | 1SG18BT043 | SHARATH S TAVARKHED        |
| 81 | 1SG18BT044 | SHILPA S                   |
| 82 | 1SG18BT045 | SRIRAM P BHAT              |
| 83 | 1SG18BT046 | SUMA K                     |
| 84 | 1SG18BT047 | VAISHNAVI B L              |
| 85 | 1SG18BT048 | VARSHA K                   |
| 86 | 1SG18BT049 | VRUNDA A PATEL             |
| 87 | 1SG18BT050 | YASHASWINI K               |

COORDINATOR

HOD

Head of the Department  
Dept. of Bio-Technology

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## Department of Biotechnology

### Certification Course on "Clinical Data Management" for AY 2018-19

#### Attendance

| Sl No. | USN        | Student Name     | 21/01/19 |    | 22/01/19 |    | 23/01/19 |    | 24/01/19 |    | 25/01/19 |    | 28/01/19 |    |
|--------|------------|------------------|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|
|        |            |                  | MS       | AS | MS       | AS | MS       | AS | MS       | AS | MS       | AS | MS       | AS |
| 1      | ISG17BT001 | ABHINAV BANARJI  | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 2      | ISG17BT002 | ADITI KASHYAP    | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 3      | ISG17BT003 | AMBIKA R         | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 4      | ISG17BT004 | ANAGHA SHESHADRI | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 5      | ISG17BT005 | ANJALI R         | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 6      | ISG17BT007 | B M KARTHIC      | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 7      | ISG17BT008 | BHOOMIKA G       | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 8      | ISG17BT009 | BHUVANESHWARI G  | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 9      | ISG17BT010 | D S NEHA         | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 10     | ISG17BT011 | DEEPIKA G        | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 11     | ISG17BT012 | DIVYA D ANAND    | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 12     | ISG17BT014 | HARSHITHA J Y    | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 13     | ISG17BT015 | KUHELI BHOWMICK  | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 14     | ISG17BT016 | MANIKUMAR E      | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 15     | ISG17BT017 | KIRAN KUMAR N    | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 16     | ISG17BT018 | NITHYASHREE S    | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 17     | ISG17BT019 | PRAKRUTHI M R    | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 18     | ISG17BT020 | PRATHIMA H S     | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 19     | ISG17BT021 | PRAVEEN P        | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 20     | ISG17BT022 | PRIYADARSHINI M  | 0        | 1  | 2        | 3  | 4        | 5  | 6        | 7  | 8        | 9  | 10       | 11 |
| 21     | ISG17BT024 | RAKSHITHA A      | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 22     | ISG17BT025 | RASHMI T S       | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 23     | ISG17BT026 | RIDA TABAESSUM   | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 24     | ISG17BT027 | RUMAISA FATIMA   | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |
| 25     | ISG17BT028 | SANCHIT S YADAV  | 1        | 2  | 3        | 4  | 5        | 6  | 7        | 8  | 9        | 10 | 11       | 12 |

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|----|------------|----------------------|---|---|---|---|---|---|---|---|---|----|----|----|
| 26 | ISG17BT030 | SANGEETHA R          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 27 | ISG17BT031 | SHASHIKALA S         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 28 | ISG17BT032 | SHWETHA S            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 29 | ISG17BT033 | SOMNATH S NGH        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 30 | ISG17BT034 | SONALI               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 31 | ISG17BT035 | SHREELAKSHMI K       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 32 | ISG17BT036 | SUPRAJA G D          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 33 | ISG17BT037 | THANUSHREE M         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 34 | ISG17BT038 | VINUTHA              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 35 | ISG17BT039 | YASHASWINI S S       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 36 | ISG17BT040 | YUKTHA R             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 37 | ISG17BT041 | KIRAN KUMAR M L      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 38 | ISG16BT028 | POOJA S              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 39 | 1SG18BT001 | ABHINANDAN KANJIKAR  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 40 | 1SG18BT002 | AMRUTHA S            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 41 | 1SG18BT003 | ANIKA ANJANA GOWDA   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 42 | 1SG18BT004 | ARCHANA S R          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 43 | 1SG18BT005 | ARUNA MOHAN          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 44 | 1SG18BT006 | AVISHKA SARIKA GOWDA | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 45 | 1SG18BT007 | AVINASH K G          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 46 | 1SG18BT008 | BENITA S ROBIN       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 47 | 1SG18BT009 | BHAGYASHREE R        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 48 | 1SG18BT010 | BHARGAVI KRISHNA     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 49 | 1SG18BT011 | BRAMARI S SHETTY     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 50 | 1SG18BT012 | CHAITRA L KABBUR     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 51 | 1SG18BT013 | CHAITRA V S          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 52 | 1SG18BT014 | CHANDRAMOULI S       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 53 | 1SG18BT016 | CHITTOJU PRERANA     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 54 | 1SG18BT017 | DEERAJ J             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

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|----|------------|-------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|
| 55 | 1SG18BT018 | DIKSHITHA S                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 56 | 1SG18BT019 | DIMPLE B H                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 57 | 1SG18BT020 | HARSHITHA P S                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 58 | 1SG18BT021 | KANCHANA B K                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 59 | 1SG18BT022 | KAUSHIK P M                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 60 | 1SG18BT023 | MONIKA N                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 61 | 1SG18BT024 | MONISHA S                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 62 | 1SG18BT025 | N VAMSHI PRIYA                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 63 | 1SG18BT026 | NANCY YADAV                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 64 | 1SG18BT027 | NAYANIKA<br>AISHWARYA         | 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9  | 10 |
| 65 | 1SG18BT028 | NISAR AHMED<br>PARASAR        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 66 | 1SG18BT029 | NISARGA P                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 67 | 1SG18BT030 | NISHA K                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 68 | 1SG18BT031 | POOJA D L                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 69 | 1SG18BT032 | POOJA R                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 70 | 1SG18BT033 | POOJA S YADAV                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 71 | 1SG18BT034 | POOJA YELLAPPA<br>KARLANNAVAR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 72 | 1SG18BT035 | FRAVEEN KUMAR T S             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 73 | 1SG18BT035 | FREETHI H K                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 74 | 1SG18BT037 | FACHANA G                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 75 | 1SG18BT038 | F RAHUL                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 76 | 1SG18BT039 | RUTHWIK K SHETTY              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 77 | 1SG18BT040 | SAHANA M                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 78 | 1SG18BT041 | SAHANA SHEEL                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 79 | 1SG18BT042 | SANTHOSH G K                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 80 | 1SG18BT043 | SHARATH S<br>TAVARKHED        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 81 | 1SG18BT044 | SHILPA S                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

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|----|------------|----------------|---|---|---|---|---|---|---|---|---|----|----|----|
| 82 | 1SG18ET045 | SRIRAM P BHAT  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 83 | 1SG18ET046 | SUMA K         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 84 | 1SG18ET047 | VAISHNAVI B L  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 85 | 1SG18BT048 | VARSHA K       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 86 | 1SG18BT049 | VRUNDA A PATEL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 87 | 1SG18BT050 | YASHASWINI K   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

  
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## Department of Biotechnology

### One week Certification Course on "Clinical Data Management"

#### Test Time Table

| Sl. No. | DATE      | DAY      | TIMINGS           |
|---------|-----------|----------|-------------------|
| 1       | 28/1/2019 | Saturday | 3:45 pm - 4:45 pm |

  
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## Department of Biotechnology

### CERTIFICATION COURSE PROGRAMME ON CLINICAL DATA MANAGEMENT QUESTION PAPER

**Duration: 1hr**

**Maximum marks: 30**

**Note:** Question number 1-15 (2M each)

1. What is EDC?
2. Name kinds of Univariate Alerts.
3. Define CRF
4. Describe data base Screening
5. Mention data entry guidelines.
6. Write the procedure data entry processing.
7. Importance of standard operating procedure for CDM.
8. Why is the data management plan is necessary?
9. Define Database archives.
10. Write a procedure for loading electronic files.
11. What is medical coding?
12. What are Data Validation and UAT?
13. Define quality control.
14. What is an objective of Clinical Data Management (CDM)?
15. What is the Role of the clinical data manager in a clinical trial?



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## Department of Biotechnology

Approved by Academic Committee members and Guest speaker

| Sl. NO. | Faculty member           | Designation         | Signature   |
|---------|--------------------------|---------------------|---|
| 1       | Dr.Veena S More          | HOD & Professor     |    |
| 2       | Prof.Prashanth Kumar H P | Assistant Professor |    |
| 3       | Prof.Soumya C            | Assistant Professor |    |
| 4       | Prof.Shobha G            | Assistant Professor |    |
| 5       | Mr.Sachin                | Guest Speaker       |   |
| 6       | Mrs.Shruthi              | Guest speaker       |  |

  
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### One week Certification Course on “Clinical Data Management”

#### Solutions for the Questions

**Duration:** 1hr

**Maximum marks:** 30

1. An electronic data capture (EDC) system is a computerized system designed for the collection of clinical data in electronic format for use mainly in human clinical trials. EDC replaces the traditional paper-based data collection methodology to streamline data collection and expedite the time to market for drugs and medical devices.
2. Univariate Alerts include valid-value, valid-range, and missing-value alerts and may be separately specified for each electronically captured field
3. The case report form (CRF) is the data collection tool for the clinical trial and can be paper or electronic. Paper CRFs will be printed, often using No Carbon Required paper, and shipped to the investigative sites conducting the clinical trial for completion after which they are couriered back to Data Management. Electronic CRFs enable data to be typed directly into fields using a computer and transmitted electronically to Data Management
5. Data entry guidelines—Describe proper entry of various data elements, proper handling of data anomalies, proper handling of missing data, and proper notation of self-evident changes. A comprehensive list of accepted abbreviations as well as symbols and their translations should be included in the guidelines. This list may be presented using a table within the DMP or by referring to a separate document.
6. Data entry guidelines, Data discrepancy conventions, Data receipt, Data processing, Data entry, Self-evident corrections, Data reconciliation, Database lock.
7. In clinical research, SOPs help define the group's (e.g., unit, division, department, institution, etc.) standard practices and daily processes conducted to assure execution of research tasks in accordance with institutional, state and federal guidance.
8. Increase impact and visibility of your research with data citation document and provide evidence for your research in conjunction with published results. Comply with funding mandates, and meet copyright and ethical compliance requirements
9. Data archiving is the process of moving data that is no longer actively used to a separate storage device for long-term retention. Archive data consists of older data that remains important to the

  
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organization or must be retained for future reference or regulatory compliance reasons. Data archives are indexed and have search capabilities, so files can be located and retrieved.

10. Human data entry via screens, Exporting PC-based data from spreadsheets or databases, Reformatted electronic reports into data files, Enhancing existing applications to automatically create output files that are ready for translation into an EDI standard, Purchasing application software that has built-in interfaces for EDI files

11. Medical coding is the transformation of healthcare diagnosis, procedures, medical services, and equipment into universal medical alphanumeric codes.

12. Once an electronic CRF (eCRF) is built, the clinical data manager (and other parties as appropriate) conducts User Acceptance Testing (UAT). The tester enters test data into the e-CRF and record whether it functions as intended. UAT is performed until all the issues (if found) are resolved


13. Quality control (QC) is a process by which entities review the quality of all factors involved in production. ISO 9000 defines quality control as "A part of quality management focused on fulfilling quality requirements"

14. The primary objective of Clinical Data Management (CDM) is to ensure timely delivery of high-quality data which are necessary to satisfy both good clinical practice (GCP) requirements and the statistical analysis and reporting requirements.

15. Clinical data managers are responsible for collecting data from a variety of medical research projects, such as clinical and pharmaceutical trials. They work collaboratively to make sure data is collected, managed and reported clearly, accurately and securely.

Approved by Academic Committee members and External expert Committee member

Academic Committee members present:

| Sl NO. | Faculty members | Designation     | Signature   |
|--------|-----------------|-----------------|---|
| 1      | Dr.Veena S More | HOD & Professor |  |






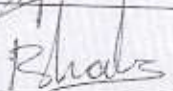

# Sapthagiri College of Engineering

(Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi)

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057

Phone: 080-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

## Department of Biotechnology

|   |                     |                     |   |
|---|---------------------|---------------------|---|
| 2 | Prashanth Kumar H P | Assistant Professor |  |
| 3 | Soumya C            | Assistant Professor |  |
| 4 | Shobha G            | Assistant Professor |  |
| 5 | Mr. Sachin          | Guest speaker       |  |
| 6 | Mrs. Shruthi        | Guest speaker       |  |

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bengaluru-560057



### Certification Course on "Clinical data Management"

#### Participant Feedback

1. How was the overall organization of the Certification Course?  
a) Poor b) Satisfactory c) Good d) Excellent
2. How appropriate were the facilities provided?  
a) Poor b) Satisfactory c) Good d) Excellent
3. Opportunity to ask questions for clarification and interaction with presenters  
a) Poor b) Satisfactory c) Good d) Excellent
4. Effectiveness of the Hands-on Sessions  
a) Poor b) Satisfactory c) Good d) Excellent
5. Topic and contents of the Certification Course  
a) Poor b) Satisfactory c) Good d) Excellent
6. How do you rate the Certification Course compared to other workshops that you have attended?  
a) Poor b) Satisfactory c) Good d) Excellent
7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory c) Good d) Excellent
8. Any Suggestions:

Student Name: Nithya Shree

Student Signature: Nithya Shree

Principal

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057



### Certification Course on "Clinical data Management"

#### Participant Feedback

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8. Any Suggestions:

Student Name: Nisarga

Student Signature: Nisarga

Nisarga  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057





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## Department of Biotechnology

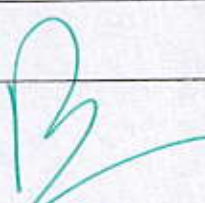
### Certification Course on "Clinical data Management"

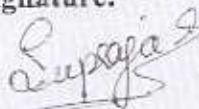
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8. Any Suggestions:

Student Name: Supriya A. D

Student Signature:

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057





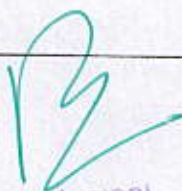
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8. Any Suggestions:

Student Name: Rishu Babbar

Student Signature: Rishu Babbar

  
Principal  
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Chikkasandra, Hesaraghatta Road  
Bangalore-560057



### Certification Course on "Clinical data Management"

#### Participant Feedback

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7. Generally how was your overall experience during the Certification Course  
a) Poor b) Satisfactory c) ~~Good~~ d) Excellent
8. Any Suggestions:

Case study Required. More.

Student Name: Kaushik. P.M.

Student Signature: Kaushik

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057

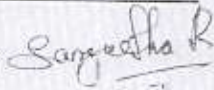


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a) Poor b) Satisfactory c) ~~Good~~ d) Excellent
8. Any Suggestions:

Student Name: SANGEETHA R

Student Signature: 

  
Principal  
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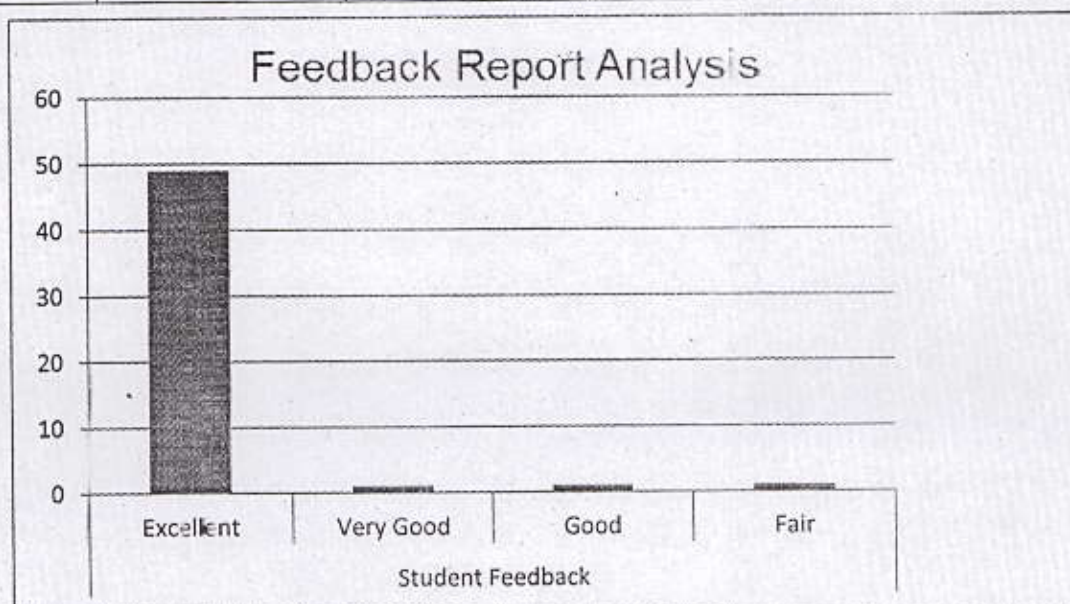
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### Department of Biotechnology

#### FEEDBACK ANALYSIS

Certification Programme: "Clinical Data management"

| No. of students | Student Feedback |           |      |      |
|-----------------|------------------|-----------|------|------|
|                 | Excellent        | Very Good | Good | Fair |
| 52              | 49               | 1         | 1    | 1    |



#### Action Report:

94 % of students were completely happy with the certification program and 2 % of students felt it was a good program and remaining 2% students were satisfied with the program.

#### Action Taken:

The Feedback report which was collected from the students were sent to the principal and he would take necessary actions based on the comments and conduct more programs for the benefit of students.

Program Coordinator

Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road,  
Bengaluru-560057

HOD  
Head of the Department  
Dept. of Biotechnology  
Sapthagiri College of Engineering  
No. 5/1, Chikkasandra  
Hesaraghatta Main Road  
Bengaluru-560057

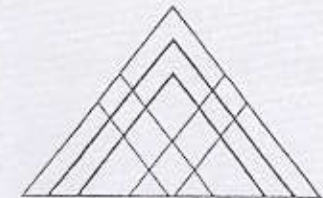


# CERTIFICATE OF PARTICIPATION

This is to certify that

MR./MS. .... RIDA TABASSUM .....

Has participated in the one week Certification course  
on **CLINICAL DATA MANAGEMENT** conducted by  
SAPTHAGIRI CLINTRAC PVT LTD, Bengaluru at the  
Department of Biotechnology, Sapthagiri College of  
Engineering, Bengaluru-57 from 21st JAN 2019 to  
28<sup>th</sup> JAN 2019.



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College of Engineering  
Creating Tomorrow

Sapthagiri  
**Clintrac**  
Evolving Tomorrow's Operations Today

*[Signature]*  
Principal  
Sapthagiri College of Engineering  
Bangalore-560057  
Course  
Co-ordinator

*[Signature]*  
HOD, DEPT OF BT

*[Signature]*  
PRINCIPAL

*[Signature]*  
Head of Clinical  
Operations  
Sapthagiri Clintrac

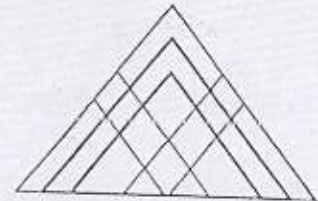


# CERTIFICATE OF PARTICIPATION

This is to certify that

MR./MS. BHUVANESHWARI. G

Has participated in the one week Certification course  
on **CLINICAL DATA MANAGEMENT** conducted by  
SAPTHAGIRI CLINTRAC PVT LTD, Bengaluru at the  
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Course  
Co-ordinator



HOD, DEPT OF BT

  
PRINCIPAL



Head of Clinical  
Operations  
Sapthagiri Clintrac



# CERTIFICATE OF PARTICIPATION

This is to certify that

MR./MS. CHITTOJU PRERANA


Has participated in the one week Certification course  
on **CLINICAL DATA MANAGEMENT** conducted by  
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Department of Biotechnology, Sapthagiri College of  
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Course  
Co-ordinator

  
HOD, DEPT OF BT

  
PRINCIPAL

  
Head of Clinical  
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Sapthagiri Clintrac



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Course  
Co-ordinator

Sapthagiri College of Engineering  
Chikkasandra, Hosareghatta Road  
Bengaluru-560057

HOD, DEPT OF BT

PRINCIPAL

Head of Clinical  
Operations  
Sapthagiri Clintrac



### Certificate Course –Clinical Data Management

Department of BT conducted Certificate Course on Clinical Data Management 21<sup>st</sup> January 2019 to 28<sup>th</sup> January 2019

**Objective of the Course:** The one week course made the students to be familiar with the major with major concepts in Clinical Data Management which is a main platform for their career. Certificate course became the vital step to improve the knowledge of the student.

**Resource person:** Mr. Sachin Head and Team, Clinical Research, Sapthagiri Clintrac Pvt. Ltd. Bangalore.

**Duration of the course:** 21<sup>st</sup> January 2019 to 28<sup>th</sup> January 2019

Student Participants in Certification Program:



Guest speakers delivering a practical knowledge to the student participants

  
Principal  
Sapthagiri College of Engineering  
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### Department of Biotechnology

| Dates    | Report  |
|----------|---|
| 21/01/19 | Speaker delivered a talk on Introduction, Clinical Data Management plan, Database design consideration and Hands on session Data Entry and Data Cleaning. |
| 22/01/19 | Speakers delivered a talk and Hands on session on Entering Data, Data Entry Completion, and Guidelines Data Security.                                     |
| 23/01/19 | Speakers delivered a talk on Quality control through database audits and hands on session on Quality Control Procedures, Query Generation.                |
| 24/01/19 | Speakers delivered a talk on Managing laboratory data, Storing lab data, creating report, Report transferring, Loading Electronic Files.                  |
| 25/01/19 | Speakers delivered a talk on Electronic data capture systems, System Validation Migrating, data integration and archiving data.                           |
| 28/01/19 | Speakers delivered a talk on Data Normalization and Querying Techniques, Data Mining for desired applications and Hands on session on Data Archiving.     |

Conclusion: The course Giving Effective Feedback aims at helping student to discover important aspects of clinical research and reactively make potential changes. A program of education resulting in a certificate of completion rather than a degree. A certificate is earned after taking a series of courses in a particular subject area. Students pursue certificates in order to get ahead in the professional field of their interest. Faculty members were also equally benefited with the course

  
**Principal**  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057

  
**Head of the Department**  
Dept. of Bio-Technology  
Sapthagiri College of Engineering  
No. 57/1, Chikkasandra  
Hesaraghatta Main Road  
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