



# KONGU ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

ERODE – 638 107

17VBTBB –BASICS IN BIOTECHNOLOGY – REPORT(2018-2019)

Name of the Value Added Course	<b>BASICS IN BIOTECHNOLOGY</b>
Course code	<b>17VBTBB</b>
Course Coordinator	Ms. R.S.CINDHU Assistant Professor, Biotechnology
Date	Starting Date: 09.07.18      Ending Date: 26.09.18
Duration of the Course	40 Hours
Total participants Enrolled	53
Successfully Completed	53
Type of Assessment	Objective and Descriptive
Course Outcome	On Completion of this course the students will be able to <ul style="list-style-type: none"><li>➤ CO1 Strengthen their knowledge in types of Biotechnology</li><li>➤ CO2 Know about initiation and development of Biotechnological products</li><li>➤ CO3 Understand the role of Biotechnology in agriculture and environment</li><li>➤ CO4 Have an overview in animal cell culture and industrial sectors</li><li>➤ CO5 Will understand the applications of Biotechnology in Marine and Medicinal field.</li></ul>
Outcome Attainment	31 out of 51 Students scored above 60% of Marks
Feedback Question Analysis – Questions Asked	
Q. No.	Parameters
Q1	The Course content was in line with my expectations
Q2	General content of the Course
Q3	The Course provided additional knowledge and skill
Q4	Well-designed Practical sessions
Q5	Schedule of the classes and other relevant details have been informed promptly
Q6	Course materials provided were useful
Q7	Provides scope for self-employment and fulfills the industrial needs



**Dr. N. RAMAN**  
PRINCIPAL,  
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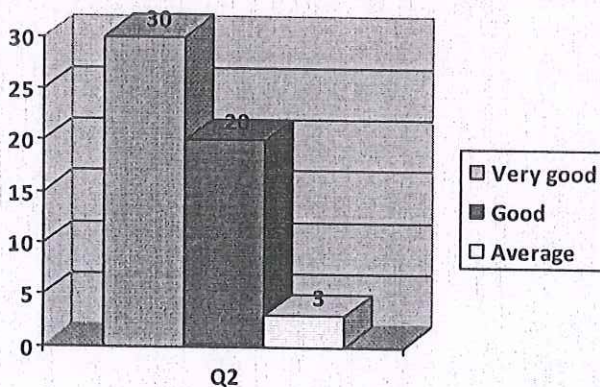
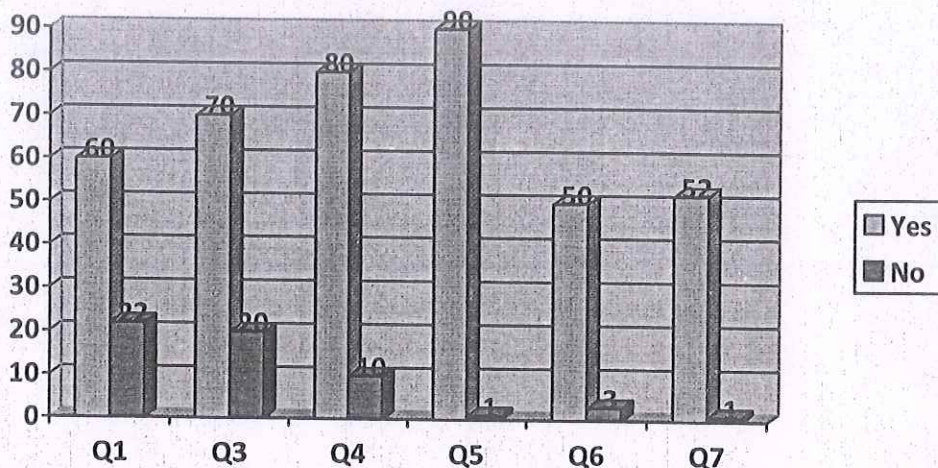
# KONGU ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

ERODE - 638 107

DEPARTMENT OF BIOTECHNOLOGY  
17VBTBB -BASICS IN BIOTECHNOLOGY

## FEEDBACK RATINGS



*R.S. Cindey*  
Course Coordinator

*R.P.L.*  
Head of the Department  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF BIOTECHNOLOGY  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
ERODE - 638 107.

*[Signature]*  
Principal,  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
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*[Signature]*  
Dr. N. RAMAN  
PRINCIPAL,  
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## DEPARTMENT OF BIOTECHNOLOGY VALUE ADDED COURSE (2018 - 2019) - PROPOSAL

Submitted to the Principal

Date: 19.02.2018

We are planning to conduct a Value Added Course titled "17VBTBB - BASICS IN BIOTECHNOLOGY" for all Department Students. The course will be benefitting the students for their career and placement activities. We kindly request you to grant permission for conducting the same.

### COURSE DETAILS:

Name of the Course	17VBTBB -BASICS IN BIOTECHNOLOGY		
Duration of the Course	40 Hours		
Conducting Department	Biotechnology		
Course Coordinator(s)	Ms. R.S.CINDHU Assistant Professor, Biotechnology		
Assessment Type (Total : 100 Marks)	<b>Section A</b> Answer All Questions Objective Questions ( 25 x 1=25 Marks)	<b>Section B</b> Answer All Questions Either or type ( 5 x 15 =75 Marks)	<b>PRACTICALS</b> (100 Marks)

### OUTCOMES:

- On Completion of this course the students will be able to
- CO1 Strengthen their knowledge in types of Biotechnology
  - CO2 Know about initiation and development of Biotechnological products
  - CO3 Understand the role of Biotechnology in agriculture and environment
  - CO4 Have an overview in animal cell culture and industrial sectors
  - CO5 Will understand the applications of Biotechnology in Marine and Medicinal field

*R.S. Cindhu*  
Course Coordinator



*Raman*  
Head of the Department  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF BIOTECHNOLOGY  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
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*Dr. N. Raman*  
PRINCIPAL,  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
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Principal  
KONGU ARTS AND SCIENCE COLLEGE  
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**ERODE – 638 107**

**DEPARTMENT OF BIOTECHNOLOGY**

**VALUE ADDED COURSE(2018- 2019) – CIRCULAR**

**Date: 06.06.2018**

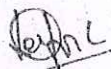
Ref. No.: KASC-AE/BIOTECH/VAC/2018-19/01

It is informed that Value Added Course on “17VBTBB –BASICS IN BIOTECHNOLOGY” will be conducted from 09.07.2018 (Monday). Registration will be on First-Come First-Serve basis. Students are asked to enroll your names for the above mentioned course after the counselling sessions on the respective dates as follows:

III Year	II Year	I Year
Counselling Date 13.06.2018(FN)	Counselling Date 13.06.2018(AN)	Counselling Date 05.07.2018


HoDs and respective Department Staff Members are instructed to follow-up the same. Your whole hearted co-operation is needed to conduct the sessions in a gentle manner.


Total instruction Hours : 40 Hours  
Course Coordinator : Ms. R.S.CINDHU  
Assistant Professor, Biotechnology  
Mail-id : cindhurathna@gmail.com

  
Head of the Department  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF BIOTECHNOLOGY  
KONGU ARTS AND SCIENCE COLLEGE  
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All Department Notice Board



  
Principal,  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
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Dr. N. RAMAN  
PRINCIPAL,  
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**KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)  
NANJANAPURAM, ERODE - 638 107**



**KASC ACADEMY OF EXCELLENCE**

**ACADEMIC YEAR 2018-2019**

**VALUE ADDED COURSE ON**

**BASICS IN  
BIOTECHNOLOGY**



**COURSE DURATION**

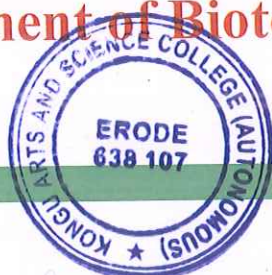
Theory -34Hours  
Practicals -6 Hours

**FOR WHOM**

All the UG Students

Organised By

**Department of Biotechnology**



**COURSE CONTENT**

- Emergence of Biotechnology
- Flavoring and sweetening agents
- Bio monitoring in environment and treatment process
- Pharmaceutical Drug Discoveries and Production

**COURSE OUTCOMES**

- Students will be able to
- Gain Knowledge in the applications of Biotechnology in Marine and Medical Field
  - Understand the Animal call culture and environment

**COORDINATOR**

Mrs. R. S. Cindhu  
Assistant Professor,  
Department of Biotechnology



**Dr. N. RAMAN**  
PRINCIPAL

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# KONGU ARTS AND SCIENCE COLLEGE

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ERODE – 638 107

DEPARTMENT OF BIOTECHNOLOGY

VALUE ADDED COURSE – SYLLABUS

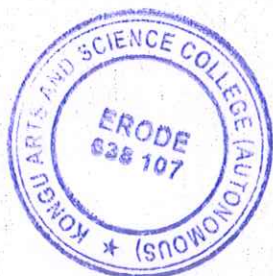
17VBTBB –BASICS IN BIOTECHNOLOGY


PAPER I- ELEMENTAL BIOTECHNOLOGY

## Course Objective:

- ❖ obtain an adequate knowledge about Biotechnology
- ❖ To enhance the skills in day to day development with basic concepts.

UNIT I	<b>History of Biotechnology:</b>	5 Hours
Traditional Biotechnology, Modern Biotechnology – emergence of modern Biotechnology, Types of Biotechnology – Blue, Green, Red, White.		
UNIT II	<b>Inception of Biotechnology</b>	5 Hours
: Development of Biotechnology from home. Fermented products in day to day life – Yoghurt and dairy products, Alcohol and beverages, Vinegar, Fish Sauce, Dough, Batter, Pickles and Bread. Flavors and Sweetening agents.		
UNIT III	<b>Biotechnology in Agriculture</b>	6 Hours
Introduction to Plant Tissue culture, Transgenic plants – Pesticide and Stress Resistance, Nutrient Supplementation. Plant Products – Plantibodies and Antibiotics. Manufacturing power fibers. <b>Biotechnology in Environment:</b> Agroecology, Climate change mitigation, Climate change adaption, Biodegradation, Bioaugmentation, Biosensor tools in Biomonitoring of environment and treatment processes		
UNIT IV	<b>Biotechnology in Animals:</b>	9 Hours
Introduction to Animal tissue culture, Cloning and transgenic animals. Human applications – Gene therapy, DNA fingerprinting, Forensic studies, Archeology. <b>Biotechnology in Industry:</b> Antibiotics, Textile, Cosmetics, Personal health care, Detergents, Papers, Biofuels, Bioplastics.		
UNIT V	<b>Biotechnology in Marine:</b>	9 Hours
Aquaculture, Aquatic animal health and sea food safety, Therapeutics and Medicine, Algal cultivation. Marine derived food additives, Nutraceuticals. Marine source and its applications. Development in Marine Bioprospecting. <b>Biotechnology in Medicine:</b> Pharmacogenomics, Pharmaceutical Drug Discoveries and Production, Genetic Testing or Screening, Molecular Diagnosis, Regenerative therapy.		
		<b>Theory</b> 34 Hours
<b>Total Hours (Theory + Lab)</b>		<b>40 Hours</b>



  
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**References:**

1. U.Sathyanarayana, Biotechnology, Books and Allied Pvt Ltd., Kolkata 2005
2. R.C.Dubey. A Text Book of Biotechnology, S.Chand and Company Ltd., 2006

On Completion of this course the students will be able to

- ❖ CO1 Strengthen their knowledge in types of Biotechnology
- ❖ CO2 Know about initiation and development of Biotechnological products
- ❖ CO3 Understand the role of Biotechnology in agriculture and environment
- ❖ CO4 Have an overview in animal cell culture and industrial sectors
- ❖ CO5 Will understand the applications of Biotechnology in Marine and Medicinal field



*ds*  
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**ERODE – 638 107**

DEPARTMENT OF BIOTECHNOLOGY

VALUE ADDED COURSE – SYLLABUS

17VBTBB –BASICS IN BIOTECHNOLOGY

**PAPER II- LAB IN BASIC BIOTECHNOLOGY**

## Experiments

(6 Hours)

1. ABO Blood Grouping
2. Total Leukocyte Count
3. Glucose Test – Urine Analysis
4. Preparation of plant extracts using different solvents
5. Qualitative Analysis of Phytochemicals
6. Estimation of Vitamin C from Fruits Boiled food sample.



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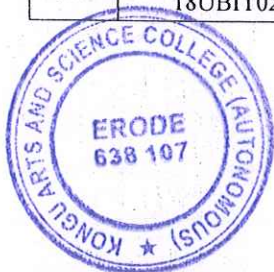
**ERODE – 638 107**

**DEPARTMENT OF BIOTECHNOLOGY**

**ACADEMIC YEAR : 2018- 2019**

**17VBTBB –BASICS IN BIOTECHNOLOGY**

S.No	REG. NO	STUDENT NAME	DEPARTMENT
1	18UBIT001	AARTHI S V	I- B.Sc BIOTECHNOLOGY
2	18UBIT002	AMRUTHA S R	I- B.Sc BIOTECHNOLOGY
3	18UBIT003	ARUNKUMAR N	I- B.Sc BIOTECHNOLOGY
4	18UBIT004	BHARANITHARAN T	I- B.Sc BIOTECHNOLOGY
5	18UBIT005	BHARATH KUMAR D B	I- B.Sc BIOTECHNOLOGY
6	18UBIT006	BHUVANESHWARI S	I- B.Sc BIOTECHNOLOGY
7	18UBIT007	DHANA PRIYA S	I- B.Sc BIOTECHNOLOGY
8	18UBIT008	DHANAA RANJANAH A L	I- B.Sc BIOTECHNOLOGY
9	18UBIT009	DURGA S	I- B.Sc BIOTECHNOLOGY
10	18UBIT010	ELAMATHI M	I- B.Sc BIOTECHNOLOGY
11	18UBIT011	GEETHA C	I- B.Sc BIOTECHNOLOGY
12	18UBIT012	GOWSHIKA S	I- B.Sc BIOTECHNOLOGY
13	18UBIT013	GOWTHAM G	I- B.Sc BIOTECHNOLOGY
14	18UBIT014	ISWARYA S	I- B.Sc BIOTECHNOLOGY
15	18UBIT015	JAISHA S	I- B.Sc BIOTECHNOLOGY
16	18UBIT016	JAYASHREE S	I- B.Sc BIOTECHNOLOGY
17	18UBIT017	KALAISELVI K	I- B.Sc BIOTECHNOLOGY
18	18UBIT018	KARTHIKEYAN S	I- B.Sc BIOTECHNOLOGY
19	18UBIT019	KARTHIKEYAN S T	I- B.Sc BIOTECHNOLOGY
20	18UBIT020	KAVIN RAJ R	I- B.Sc BIOTECHNOLOGY
21	18UBIT021	LAKSHMI DURGA C E	I- B.Sc BIOTECHNOLOGY
22	18UBIT022	LAVANYA S	I- B.Sc BIOTECHNOLOGY
23	18UBIT023	MADHUMITHA S	I- B.Sc BIOTECHNOLOGY
24	18UBIT024	MANJUNATH M	I- B.Sc BIOTECHNOLOGY
25	18UBIT025	MEENAMBIGA B	I- B.Sc BIOTECHNOLOGY
26	18UBIT026	MIRUTHULA P	I- B.Sc BIOTECHNOLOGY
27	18UBIT027	MITHILA SRIKANTH	I- B.Sc BIOTECHNOLOGY



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28	18UBIT028	MOHAMUTHA HILMIYA M #	I- B.Sc BIOTECHNOLOGY
29	18UBIT029	NANDITA K	I- B.Sc BIOTECHNOLOGY
30	18UBIT030	NIRMALESVARI V R	I- B.Sc BIOTECHNOLOGY
31	18UBIT031	PAVITHRA R	I- B.Sc BIOTECHNOLOGY
32	18UBIT032	PRAVEEN M	I- B.Sc BIOTECHNOLOGY
33	18UBIT033	PRAVEENA P	I- B.Sc BIOTECHNOLOGY
34	18UBIT034	PRIYANKA S	I- B.Sc BIOTECHNOLOGY
35	18UBIT035	RAGAVI M S	I- B.Sc BIOTECHNOLOGY
36	18UBIT036	RAMYA K	I- B.Sc BIOTECHNOLOGY
37	18UBIT037	SAFIHA M	I- B.Sc BIOTECHNOLOGY
38	18UBIT038	SAI SWEATHA S D	I- B.Sc BIOTECHNOLOGY
39	18UBIT039	SARANYA M	I- B.Sc BIOTECHNOLOGY
40	18UBIT040	SARIGA P	I- B.Sc BIOTECHNOLOGY
41	18UBIT041	SARUMATHI S	I- B.Sc BIOTECHNOLOGY
42	18UBIT042	SHANTHIYA SWANLY A	I- B.Sc BIOTECHNOLOGY
43	18UBIT043	SHOBIKA S	I- B.Sc BIOTECHNOLOGY
44	18UBIT044	SOUNDARYA M	I- B.Sc BIOTECHNOLOGY
45	18UBIT045	SUNISH KUMAR V	I- B.Sc BIOTECHNOLOGY
46	18UBIT046	SUVEKA T	I- B.Sc BIOTECHNOLOGY
47	18UBIT047	SUWETHA R	I- B.Sc BIOTECHNOLOGY
48	18UBIT048	TAMIL SELVAM S	I- B.Sc BIOTECHNOLOGY
49	18UBIT049	THARANI P V *	I- B.Sc BIOTECHNOLOGY
50	18UBIT050	THILAGAVATHY M	I- B.Sc BIOTECHNOLOGY
51	18UBIT051	TULASI SHARMA	I- B.Sc BIOTECHNOLOGY
52	18UBIT052	UMAMAGESHWARI A	I- B.Sc BIOTECHNOLOGY
53	18UBIT053	VANITHA D	I- B.Sc BIOTECHNOLOGY

*R.S. Cindeef*  
Course Coordinator



*Rajm*  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF BIOTECHNOLOGY  
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*Dr. N. RAMAN*  
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**ERODE – 638 107**

**DEPARTMENT OF BIOTECHNOLOGY  
ACADEMIC YEAR : 2018- 2019  
SCHEDULE FOR THE VALUE ADDED COURSE  
17VBTBB –BASICS IN BIOTECHNOLOGY**

S. No.	Date	Time	Topics Covered	Theory Hours	Lab Hours
1	09.07.18	03.20 - 04.20	Traditional Biotechnology	1	-
2	10.07.18	03.20 - 04.20	Modern Biotechnology	1	-
3	11.07.18	03.20 - 04.20	emergence of modern Biotechnology	1	-
4	12.07.18	03.20 - 04.20	Types of Biotechnology – Blue, Green, Red , White	1	-
5	13.07.18	03.20 - 04.20	Development of Biotechnology from home	1	-
6	17.07.18	03.20 - 04.20	Fermented products in day to day life	1	-
7	18.07.18	03.20 - 04.20	Yoghurt and dairy products,	1	-
8	19.07.18	03.20 - 04.20	Alcohol and beverages, Vinegar, Fish Sauce	1	-
9	20.07.18	03.20 - 04.20	Dough, Batter,Pickles and Bread	1	-
10	21.07.18	03.20 - 04.20	Flavors and Sweetening agents.	1	-
11	31.07.18	03.20 - 04.20	Introduction to Plant Tissue culture	1	-
12	01.08.18	03.20 - 04.20	Transgenic plants – Pesticide Stress Resistance	1	-
13	02.08.18	03.20 - 04.20	Nutrient Supplementation Plant Products – Plantibodies	1	-
14	06.08.18	03.20 - 04.20	Antibiotics. Manufacturing power fibers.	1	-
15	07.08.18	03.20 - 04.20	Agroecology, Climate change mitigation,	1	-
16	09.08.18	03.20 - 04.20	Climate change adaption	1	-
17	11.08.18	03.20 - 04.20	Biodegradation, Bioaugmentation	1	-
18	13.08.18	03.20 - 04.20	Introduction to Animal tissue culture	1	-
19	14.08.18	03.20 - 04.20	Cloning and transgenic animals	1	-
20	16.08.18	03.20 - 04.20	Human applications – Gene therapy, DNA fingerprinting	1	-
21	20.08.18	03.20 - 04.20	Forensic studies, Archeology	1	-
22	21.08.18	03.20 - 04.20	Antibiotics, Textile, Cosmetics	1	-
23	23.08.18	03.20 - 04.20	Personal health care, Detergents	1	-
24	24.08.18	03.20 - 04.20	Papers, Biofuels, Bioplastics	1	-



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S. No.	Date	Time	Topics Covered	Theory Hours	Lab Hours
25	06.09.18	03.20 - 04.20	Aquaculture, Aquatic animal health and sea food safety,	1	-
26	07.09.18	03.20 - 04.20	Therapeutics and Medicine, Algal cultivation	1	-
27	10.09.18	03.20 - 04.20	Marine derived food additives.	1	-
28	11.09.18	03.20 - 04.20	Neutraceuticals	1	-
29	12.09.18	03.20 - 04.20	Marine source and its applications	1	-
30	14.09.18	03.20 - 04.20	Development in Marine Bioprospecting.	1	-
31	17.09.18	03.20 - 04.20	Pharmacogenomics, Pharmaceutical Drug Discoveries	1	-
32	18.09.18	03.20 - 04.20	Genetic Testing or Screening	1	-
33	19.09.18	03.20 - 04.20	, Molecular Diagnosis	1	-
34	20.09.18	03.20 - 04.20	Regenerative therapy	1	-
35	22.09.18	10.20 - 11.20	ABO Blood Grouping	-	1
36	22.09.18	11.20 - 12.20	Total Leukocyte Count	-	1
37	22.09.18	03.20 - 04.20	Glucose Test – Urine Analysis	-	1
38	24.09.18	03.20 - 04.20	Preparation of plant extracts using different solvents	-	1
39	25.09.18	03.20 - 04.20	Qualitative Analysis of Phytochemicals	-	1
40	26.09.18	03.20 - 04.20	Estimation of Vitamin C from Fruits	-	1
<b>Total</b>				<b>34</b>	<b>6</b>
<b>Total Hours (Theory + Lab)</b>				<b>40 Hours</b>	
<b>Assessment Date &amp; Time</b> : 01.10.18 (Monday) & 10:00 am to 01:00 pm					
<b>Type Of Assessment</b> : Objective And Descriptive Questions					

*R.S. Cheluvu*  
Course Coordinator

*R.S. Cheluvu*  
Head of the Department  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF BIOTECHNOLOGY  
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*[Signature]*  
Principal  
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## DEPARTMENT OF BIOTECHNOLOGY

### 17VBTBB -BASICS IN BIOTECHNOLOGY - ATTENDANCE

S. No.	REG. NO.	NAME	9/7/18	10/7/18	11/7/18	12/7/18	13/7/18	17/7/18	18/7/18	19/7/18	20/7/18	21/7/18
			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
1	18UBIT001	AARTHI S V	/	/	/	/	/	/	/	/	/	/
2	18UBIT002	AMRUTHA S R	/	/	/	/	/	/	/	/	/	/
3	18UBIT003	ARUNKUMAR N	/	/	/	/	/	/	/	/	/	/
4	18UBIT004	BHARANITHARAN T	/	/	/	/	/	/	/	/	/	/
5	18UBIT005	BHARATH KUMAR D B	/	/	/	/	/	/	/	/	/	A
6	18UBIT006	BHUVANESHWARI S	/	/	/	/	/	/	/	/	/	/
7	18UBIT007	DHANA PRIYA S	/	/	/	/	/	/	/	/	/	/
8	18UBIT008	DHANAA RANJANAH A L	/	/	/	/	/	/	/	/	/	/
9	18UBIT009	DURGA S	/	/	/	A	/	/	A	/	/	/
10	18UBIT010	ELAMATHI M	/	/	/	/	/	/	/	/	/	/
11	18UBIT011	GEETHA C	/	/	/	/	/	/	/	/	/	/
12	18UBIT012	GOWSHIKA S	/	/	/	/	/	/	/	/	/	/
13	18UBIT013	GOWTHAM G	/	/	/	/	/	/	/	/	/	/
14	18UBIT014	ISWARYA S	/	/	/	/	/	/	/	/	/	/
15	18UBIT015	JAISHA S	/	/	/	/	/	/	/	/	/	/
16	18UBIT016	JAYASHREE S	/	/	/	/	/	/	/	/	/	/
17	18UBIT017	KALAISELVI K	/	/	/	/	/	/	/	/	/	A
18	18UBIT018	KARTHIKEYAN S	/	/	/	/	/	/	/	/	/	/



Dr. N. RAMAN  
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DEPARTMENT OF BIOTECHNOLOGY

17VBTBB - BASICS IN BIOTECHNOLOGY - ATTENDANCE

S. No.	REG. NO.	NAME	9/7/18	10/7/18	11/7/18	12/7/18	13/7/18	17/7/18	18/7/18	19/7/18	20/7/18	21/7/18
			3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20
19	18UBIT019	KARTHIKEYAN S T	/	/	/	/	/	/	/	/	/	/
20	18UBIT020	KAVIN RAJ R	/	/	/	/	/	/	/	/	/	A
21	18UBIT021	LAKSHMI DURGA C E	A	/	/	/	/	/	/	/	/	A
22	18UBIT022	LAVANYA S	/	/	/	/	/	/	/	/	/	/
23	18UBIT023	MADHUMITHA S	/	/	/	/	/	/	/	/	/	/
24	18UBIT024	MANJUNATH M	/	/	/	/	/	/	/	/	/	/
25	18UBIT025	MEENAMBIGA B	/	/	/	/	/	/	/	/	/	/
26	18UBIT026	MIRUTHULA P	/	/	/	/	/	/	/	/	/	/
27	18UBIT027	MITHILA SRIKANTH	/	/	/	/	/	/	/	/	/	/
28	18UBIT028	MOHAMUTHA HILMIYA M	A	A	A	A	A	A	A	A	A	A
29	18UBIT029	NANDITA K	/	/	/	/	/	/	/	/	/	/
30	18UBIT030	NIRMALESVARI V R	/	/	/	/	/	/	/	/	/	/
31	18UBIT031	PAVITHRA R	/	/	/	/	/	/	/	A	A	/
32	18UBIT032	PRAVEEN M	/	/	/	/	/	/	/	/	/	/
33	18UBIT033	PRAVEENA P	/	/	/	/	/	/	/	/	/	/
34	18UBIT034	PRIYANKA S	/	/	/	/	/	/	/	A	A	/
35	18UBIT035	RAGAVI M S	/	/	/	/	/	/	/	/	/	/
36	18UBIT036	RAMYA K	/	/	/	/	/	/	/	/	/	/
37	18UBIT037	SAFIHA M	/	/	/	/	/	/	/	/	/	/
38	18UBIT038	SAI SWEATHA S D	/	/	/	/	/	/	/	/	/	A
39	18UBIT039	SARANYA M	/	/	/	/	/	/	/	/	/	/
40	18UBIT040	SARIGA P	/	/	/	/	/	/	/	/	/	/
41	18UBIT041	SARUMATHI S	/	/	/	/	/	/	/	/	/	/
42	18UBIT042	SHANTHIYA SWANLY A	/	/	/	/	/	/	/	/	/	/
43	18UBIT043	SHOBICA S	/	/	/	/	/	/	/	/	/	/
44	18UBIT044	SOUNDARYA M	/	/	/	/	/	/	/	/	/	/
45	18UBIT045	SUNISH KUMAR V	/	/	/	/	/	/	/	/	/	A



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S. No.	REG. NO.	NAME	9/7/18	10/7/18	11/7/18	12/7/18	13/7/18	17/7/18	18/7/18	19/7/18	20/7/18	21/7/18
			2:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
46	18UBIT046	SUVEKA T	/	/	/	/	/	/	/	/	/	/
47	18UBIT047	SUWETHA R	/	/	/	/	/	/	/	/	/	/
48	18UBIT048	TAMIL SELVAM S	/	/	/	/	/	/	/	/	/	/
49	18UBIT049	THARANI P V *	A	A	A	A	A	A	A	A	A	A
50	18UBIT050	THILAGAVATHY M	/	/	/	/	/	/	/	/	/	/
51	18UBIT051	TULASI SHARMA	/	/	/	/	/	/	/	/	/	/
52	18UBIT052	UMAMAGESHWARI A	/	/	/	A	/	/	/	/	/	/
53	18UBIT053	VANITHA D	/	/	/	/	/	/	/	/	/	/
			RS	RS	RS	KI	KI	KI	KI	KI	KI	KI

RS - Ms. R.S. Cindhu  
KI - Ms. K. Indhumathi

*R.S. Cindhu*  
Course Coordinator

*(Signature)*  
Head of the Department  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF BIOTECHNOLOGY  
KONGU ARTS AND SCIENCE COLLEGE  
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*(Signature)*  
Principal  
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## DEPARTMENT OF BIOTECHNOLOGY

### 17VBTBB - BASICS IN BIOTECHNOLOGY - ATTENDANCE

S. No.	REG. NO.	NAME	31.7.18	1.8.18	2.8.18	6.8.18	7.8.18	9.8.18	11.8.18	13.8.18	14.8.18	16.8.18
			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
1	18UBIT001	AARTHI S V	/	/	/	/	/	A	/	/	/	/
2	18UBIT002	AMRUTHA S R	/	/	/	/	/	A	/	/	/	/
3	18UBIT003	ARUNKUMAR N	/	/	/	/	/	/	/	/	A	/
4	18UBIT004	BHARANITHARAN T	/	/	/	/	/	/	/	/	A	/
5	18UBIT005	BHARATH KUMAR D B	/	/	/	/	/	/	/	/	/	/
6	18UBIT006	BHUVANESHWARI S	/	/	/	/	/	/	/	A	/	/
7	18UBIT007	DHANA PRIYA S	/	/	/	/	/	/	/	/	/	/
8	18UBIT008	DHANAA RANJANAH A L	/	/	/	/	/	/	/	/	/	/
9	18UBIT009	DURGA S	/	A	/	/	/	/	/	/	/	/
10	18UBIT010	ELAMATHI M	/	/	/	/	/	A	/	/	/	/
11	18UBIT011	GEETHA C	/	/	/	/	/	/	/	/	/	/
12	18UBIT012	GOWSHIKA S	/	/	/	/	/	/	/	/	/	/
13	18UBIT013	GOWTHAM G	/	/	/	/	/	/	/	/	/	/
14	18UBIT014	ISWARYA S	/	/	/	/	/	/	/	/	/	/
15	18UBIT015	JAISHA S	/	/	/	/	/	/	/	/	/	/
16	18UBIT016	JAYASHREE S	/	/	/	/	/	/	A	A	/	/
17	18UBIT017	KALAISELVI K	/	/	/	/	A	/	/	/	/	/
18	18UBIT018	KARTHIKEYAN S	A	/	/	A	/	/	/	/	/	/



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DEPARTMENT OF BIOTECHNOLOGY

17VBTBB - BASICS IN BIOTECHNOLOGY - ATTENDANCE

S. No.	REG. NO.	NAME	31.7.18	1.8.18	2.8.18	6.8.18	7.8.18	9.8.18	11.8.18	13.8.18	14.8.18	16.8.18
			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
19	18UBIT019	KARTHIKEYAN S T	/	/	/	/	/	/	/	/	/	/
20	18UBIT020	KAVIN RAJ R	/	/	/	/	A	/	/	/	A	/
21	18UBIT021	LAKSHMI DURGA CE	/	/	/	/	/	/	/	/	/	/
22	18UBIT022	LAVANYA S	/	/	/	/	/	/	/	/	/	/
23	18UBIT023	MADHUMITHA S	/	/	/	/	/	/	/	/	/	/
24	18UBIT024	MANJUNATH M	/	/	/	/	/	/	/	/	/	/
25	18UBIT025	MEENAMBIGA B	/	/	/	/	/	/	/	/	/	/
26	18UBIT026	MIRUTHULA P	/	/	/	/	/	/	/	A	/	/
27	18UBIT027	MITHILA SRIKANTH	/	/	/	A	A	/	/	/	/	/
28	18UBIT028	MOHAMUTHA HILMIYA M	/	/	/	/	/	/	A	/	A	/
29	18UBIT029	NANDITA K	/	/	/	/	/	/	/	/	A	/
30	18UBIT030	NIRMALESVARI V R	/	/	/	/	/	/	/	/	/	/
31	18UBIT031	PAVITHRA R	/	/	/	/	/	/	/	/	/	/
32	18UBIT032	PRAVEEN M	/	/	/	/	/	/	/	/	/	/
33	18UBIT033	PRAVEENA P	/	/	/	/	/	/	/	/	/	/
34	18UBIT034	PRIYANKA S	/	A	/	/	/	/	A	/	A	/
35	18UBIT035	RAGAVI M S	/	/	/	/	/	/	/	/	/	/
36	18UBIT036	RAMYA K	/	/	/	/	/	/	/	/	/	/
37	18UBIT037	SAFIHA M	A	/	/	/	/	/	/	/	/	/
38	18UBIT038	SAI SWEATHA S D	/	/	/	/	/	/	/	/	/	/
39	18UBIT039	SARANYA M	A	/	/	/	/	/	A	/	A	/
40	18UBIT040	SARIGA P	/	/	/	/	A	/	/	A	/	/
41	18UBIT041	SARUMATHI S	/	/	/	/	/	/	/	/	/	/
42	18UBIT042	SHANTHIYA SWANLY A	/	/	/	/	/	/	/	/	/	/
43	18UBIT043	SHOBIKA S	/	/	/	/	/	/	A	/	/	/
44	18UBIT044	SOUNDARYA M	/	/	/	/	/	/	/	/	/	/
45	18UBIT045	SUNISH KUMAR V	/	/	/	/	/	/	/	/	/	/



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17VBTBB -BASICS IN BIOTECHNOLOGY -ATTENDANCE

S. No.	REG. NO.	NAME	5.7.18	1.8.18	2.8.18	6.8.18	7.8.18	9.8.18	11.8.18	12.8.18	14.8.18	16.8.18
			3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20	3.20-4.20
46	18UBIT046	SUVEKA T	/	/	A	/	/	/	/	/	/	/
47	18UBIT047	SUWETHA R	/	/	A	/	/	/	/	/	/	/
48	18UBIT048	TAMIL SELVAM S	A	A	A	/	/	/	A	/	/	/
49	18UBIT049	THARANI P V *	/	/	/	/	/	/	/	/	/	/
50	18UBIT050	THILAGAVATHY M	/	/	/	/	/	/	A	/	/	/
51	18UBIT051	TULASI SHARMA	/	/	/	/	/	/	/	/	/	/
52	18UBIT052	UMAMAGESHWARI A	/	/	/	/	/	/	/	/	/	/
53	18UBIT053	VANITHA D	/	/	/	/	/	/	/	/	/	/
			RS	RS	RS	RS	RS	RS	RS	RS	RS	RS
RS - Ms. R. S. Cinthu KI - Ms. K. Indhumathi												

*R. S. Cinthu*  
Course Coordinator

*R. S. Cinthu*  
Head of the Department  
HEAD OF THE DEPARTMENT  
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*R. S. Cinthu*  
Principal  
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## DEPARTMENT OF BIOTECHNOLOGY

### 17VBTBB -BASICS IN BIOTECHNOLOGY - ATTENDANCE

S. No.	REG. NO.	NAME	17.9.18	18.9.18	19.9.18	20.9.18	21.9.18	22.9.18	22.9.18	24.9.18	25.9.18	26.9.18
			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	11:20-12:20	11:20-12:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
1	18UBIT001	AARTHI S V	/	/	/	/	/	/	/	/	/	/
2	18UBIT002	AMRUTHA S R	/	/	/	/	/	/	/	/	/	/
3	18UBIT003	ARUNKUMAR N	/	/	/	/	/	/	/	/	/	/
4	18UBIT004	BHARANITHARAN T	/	/	/	/	/	/	/	/	/	/
5	18UBIT005	BHARATH KUMAR D B	/	/	/	/	/	/	/	/	/	/
6	18UBIT006	BHUVANESHWARI S	A	/	/	/	/	/	/	/	/	/
7	18UBIT007	DHANA PRIYA S	/	/	/	/	/	/	/	/	/	/
8	18UBIT008	DHANAA RANJANAH A L	A	/	/	/	/	/	/	/	/	/
9	18UBIT009	DURGA S	/	/	/	/	/	/	A	/	/	/
10	18UBIT010	ELAMATHI M	/	/	/	/	/	/	/	/	/	/
11	18UBIT011	GEETHA C	/	A	/	/	/	/	/	/	/	/
12	18UBIT012	GOWSHIKA S	/	/	/	/	/	/	/	/	/	/
13	18UBIT013	GOWTHAM G	/	/	/	/	/	/	/	/	/	/
14	18UBIT014	ISWARYA S	/	/	/	/	/	/	/	A	/	/
15	18UBIT015	JAISHA S	/	/	/	/	/	/	/	/	/	/
16	18UBIT016	JAYASHREE S	A	/	/	/	/	/	/	A	/	/
17	18UBIT017	KALAISELVI K	/	/	/	/	/	/	/	/	/	/
18	18UBIT018	KARTHIKEYAN S	/	/	/	/	/	/	/	/	/	/



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			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	10:20-11:20	11:20-12:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
19	18UBIT019	KARTHIKEYAN S T	/	/	/	/	/	/	/	/	/	/
20	18UBIT020	KAVIN RAJ R	/	/	/	/	/	/	/	/	/	/
21	18UBIT021	LAKSHMI DURGA C E	/	/	/	/	A	A	A	/	/	/
22	18UBIT022	LAVANYA S	/	/	/	/	/	/	A	/	/	/
23	18UBIT023	MADHUMITHA S	/	/	/	/	/	/	/	/	/	/
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26	18UBIT026	MIRUTHULA P	/	/	/	/	/	/	/	/	/	/
27	18UBIT027	MITHILA SRIKANTH	/	/	/	/	/	/	/	/	/	/
28	18UBIT028	MOHAMUTHA HILMIYA M	A	A	/	A	/	/	/	/	/	/
29	18UBIT029	NANDITA K	/	/	/	/	/	/	/	/	/	/
30	18UBIT030	NIRMALESVARI V R	/	/	/	/	/	/	/	/	/	/
31	18UBIT031	PAVITHRA R	/	/	/	/	/	/	/	/	/	/
32	18UBIT032	PRAVEEN M	/	/	/	/	/	/	/	/	/	/
33	18UBIT033	PRAVEENA P	/	/	/	/	/	/	/	/	/	/
34	18UBIT034	PRIYANKA S	/	/	/	/	/	/	/	/	/	/
35	18UBIT035	RAGAVI M S	/	/	/	/	/	/	/	/	/	/
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37	18UBIT037	SAFIHA M	/	/	/	/	/	/	/	/	/	/
38	18UBIT038	SAI SWEATHA S D	/	/	/	/	/	/	/	/	A	/
39	18UBIT039	SARANYA M	/	A	/	/	/	/	/	/	/	/
40	18UBIT040	SARIGA P	/	/	/	/	/	/	/	/	/	/
41	18UBIT041	SARUMATHI S	/	/	/	/	/	/	/	/	/	/
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43	18UBIT043	SHOBICA S	/	/	/	/	/	/	/	/	/	/
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			3:20 - 4:20	3:20 - 4:20	3:20 - 4:20	3:20 - 4:20	10:20 - 11:20	11:20 - 12:20	3:20 - 4:20	3:20 - 4:20	8:20 - 4:20	3:20 - 4:20
46	18UBIT046	SUVEKA T	/	/	/	/	/	/	/	/	/	/
47	18UBIT047	SUWETHA R	/	/	/	/	/	/	/	/	/	/
48	18UBIT048	TAMIL SELVAM S	/	/	/	/	/	/	/	/	/	/
49	18UBIT049	THARANI P V *	/	/	/	/	/	/	/	/	/	/
50	18UBIT050	THILAGAVATHY M	/	/	/	/	/	/	A	/	/	/
51	18UBIT051	TULASI SHARMA	/	/	/	/	/	/	/	/	/	/
52	18UBIT052	UMAMAGESHWARI A	/	/	/	/	/	/	/	/	/	/
53	18UBIT053	VANITHA D	/	/	/	/	/	/	/	/	/	/
			R	R	R	R	R	R	R	R	R	R
			KI	KI	KI	KI	RS	RS	RS	RS	RS	RS
KI - Mrs. K. Irubumathi												
RS - Mrs. R. S. Cindhu												

*R. S. Cindhu*  
Course Coordinator

*Rajni*  
Head of the Department  
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## DEPARTMENT OF BIOTECHNOLOGY

### 17VBTBB -BASICS IN BIOTECHNOLOGY - ATTENDANCE

S. No.	REG. NO.	NAME	20.8.18	21.8.18	23.8.18	24.8.18	6.9.18	7.9.18	10.9.18.	11.9.18	12.9.18	14.9.18
			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
1	18UBIT001	AARTHI S V	/	/	/	/	A	/	/	/	/	/
2	18UBIT002	AMRUTHA S R	/	/	/	/	/	/	/	/	/	/
3	18UBIT003	ARUNKUMAR N	/	/	/	/	/	/	/	/	/	A
4	18UBIT004	BHARANITHARAN T	/	/	/	/	/	/	/	/	/	A
5	18UBIT005	BHARATH KUMAR D B	/	/	/	/	/	/	/	/	/	/
6	18UBIT006	BHUVANESHWARI S	/	/	/	/	/	/	/	/	/	/
7	18UBIT007	DHANA PRIYA S	/	/	/	/	/	/	/	/	/	/
8	18UBIT008	DHANAA RANJANAH A L	/	/	/	/	/	/	/	/	/	/
9	18UBIT009	DURGA S	/	A	/	/	/	/	/	/	A	/
10	18UBIT010	ELAMATHI M	/	/	/	/	/	/	/	/	A	/
11	18UBIT011	GEETHA C	/	/	/	/	/	/	/	/	/	/
12	18UBIT012	GOWSHIKA S	/	/	/	/	/	A	/	/	/	/
13	18UBIT013	GOWTHAM G	/	/	A	/	/	A	/	/	/	A
14	18UBIT014	ISWARYA S	/	/	/	/	/	/	/	/	/	/
15	18UBIT015	JAISHA S	/	/	/	/	/	/	/	A	A	A
16	18UBIT016	JAYASHREE S	/	/	/	A	/	/	/	/	/	/
17	18UBIT017	KALAISELVI K	/	/	/	/	/	/	/	/	/	/
18	18UBIT018	KARTHIKEYAN S	/	/	/	/	/	/	/	/	A	/



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# KONGU ARTS AND SCIENCE COLLEGE

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DEPARTMENT OF BIOTECHNOLOGY

17VBTBB -BASICS IN BIOTECHNOLOGY -ATTENDANCE

S. No.	REG. NO.	NAME	20.8.18	21.8.18	23.8.18	24.8.18	6.9.18	7.9.18	10.9.18	11.9.18	12.9.18	14.9.18
			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
19	18UBIT019	KARTHIKEYAN S T	/	/	/	/	/	/	/	/	/	/
20	18UBIT020	KAVIN RAJ R	/	/	A	/	/	/	/	/	/	/
21	18UBIT021	LAKSHMI DURGA C E	/	/	/	/	/	/	/	/	/	/
22	18UBIT022	LAVANYA S	/	/	/	/	/	/	/	/	/	/
23	18UBIT023	MADHUMITHA S	/	/	/	/	/	/	/	/	/	/
24	18UBIT024	MANJUNATH M	/	/	/	/	/	/	/	/	/	/
25	18UBIT025	MEENAMBIGA B	/	/	/	/	/	A	/	/	A	A
26	18UBIT026	MIRUTHULA P	/	/	/	/	/	/	/	/	/	/
27	18UBIT027	MITHILA SRIKANTH	/	/	/	/	/	/	/	/	/	/
28	18UBIT028	MOHAMUTHA HILMIYA M	/	/	A	/	A	/	/	/	/	/
29	18UBIT029	NANDITA K	/	/	/	/	/	/	/	/	A	/
30	18UBIT030	NIRMALESVARI V R	/	/	/	/	/	/	/	/	/	A
31	18UBIT031	PAVITHRA R	/	/	/	/	/	/	A	A	/	/
32	18UBIT032	PRAVEEN M	/	/	/	/	/	A	/	/	/	A
33	18UBIT033	PRAVEENA P	/	/	/	/	/	/	/	/	/	/
34	18UBIT034	PRIYANKA S	/	/	/	/	/	/	/	/	/	/
35	18UBIT035	RAGAVI M S	/	/	/	/	/	/	/	/	/	/
36	18UBIT036	RAMYA K	/	/	/	/	/	/	/	/	/	A
37	18UBIT037	SAFIHA M	/	/	/	/	/	/	/	/	/	/
38	18UBIT038	SAI SWEATHA S D	/	/	/	/	/	/	/	/	/	/
39	18UBIT039	SARANYA M	/	/	/	/	/	/	/	/	/	/
40	18UBIT040	SARIGA P	/	/	/	/	/	/	/	A	/	/
41	18UBIT041	SARUMATHI S	/	/	/	/	/	A	/	/	/	/
42	18UBIT042	SHANTHIYA SWANLY A	/	/	/	/	/	/	/	/	A	/
43	18UBIT043	SHOBICA S	/	/	A	/	/	/	/	/	/	/
44	18UBIT044	SOUNDARYA M	/	/	/	/	/	/	/	/	/	/
45	18UBIT045	SUNISH KUMAR V	/	/	/	/	/	/	/	/	/	/



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DEPARTMENT OF BIOTECHNOLOGY  
17VBTBB -BASICS IN BIOTECHNOLOGY -ATTENDANCE

S. No.	REG. NO.	NAME	20.8.18	21.8.18	23.8.18	24.8.18	6.9.18	7.9.18	10.9.18	11.9.18	12.9.18	14.9.18
			3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20	3:20-4:20
46	18UBIT046	SUVEKA T	/	/	/	/	/	/	/	/	/	/
47	18UBIT047	SUWETHA R	/	/	A	/	/	/	/	/	/	/
48	18UBIT048	TAMIL SELVAM S	A	A	/	/	/	/	/	/	A	/
49	18UBIT049	THARANI P V *	/	/	/	A	/	/	/	/	/	/
50	18UBIT050	THILAGAVATHY M	/	/	/	A	/	/	/	/	/	/
51	18UBIT051	TULASI SHARMA	/	A	/	/	/	/	/	/	A	/
52	18UBIT052	UMAMAGESHWARI A	/	/	/	/	/	/	/	/	A	/
53	18UBIT053	VANITHA D	/	/	/	/	/	/	/	/	/	/
			KI	KI	KI	RS	RS	RS	RS	RS	RS	RS
KI - Mrs. K. Indhumathi RS - Mrs. R.S. Cindhu												

*R.S. Cindhu*  
Course Coordinator

*R.S. Cindhu*  
Head of the Department  
HEAD OF THE DEPARTMENT  
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*[Signature]*  
Principal  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
NANJANAPURAM, ERODE - 638 107.



*[Signature]*  
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DEPARTMENT OF BIOTECHNOLOGY  
17VBTBB –BASICS IN BIOTECHNOLOGY -QUESTION PAPER

PAPER –I: ELEMENTAL BIOTECHNOLOGY

Time: 3 Hours

Max.Marks:100

Section – A

(25x1=25)

Answer ALL the Questions

I. Choose the correct answer

- Egyptians used to prepare vinegar from \_\_\_\_\_  
(a) lemon (b) dates  
(c) apple (d) orange
- Pharmacogenomics is the field under \_\_\_\_\_ Biotechnology.  
(a) Red (b) Green  
(c) Blue (d) White
- Kefir grains contain \_\_\_\_\_ of lactic acid.  
(a) 83-90% (b) 10-25%  
(c) 20-36% (d) 78-96%
- Vinegar consists of \_\_\_\_\_  
(a) lactic acid (b) formic acid  
(c) acetic acid (d) butyric acid
- \_\_\_\_\_ is a plant organ used to initiate a culture.  
(a) Relictarant (b) Contaminant  
(c) Explant (d) Morphogen
- \_\_\_\_\_ is the study of ecological process.  
(a) Algology (b) Agroecology  
(c) Geology (d) Zoology
- Ham introduced the first serum free media in the year \_\_\_\_\_  
(a) 1985 (b) 1983  
(c) 1975 (d) 1965
- \_\_\_\_\_ uses radio carbon dating.  
(a) Odontology (b) Entomology  
(c) Archeology (d) Ballistics
- Sea foods contribute to \_\_\_\_\_ of total protein.  
(a) 14-16 % (b) 10-13 %  
(c) 5-8 % (d) 23-26 %
- The optimal pH for cultivating micro algae is \_\_\_\_\_  
(a) 5.6 (b) 8.2  
(c) 7.3 (d) 9.1



*al*  
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## II. Fill in the blanks

11. Double helical structure of DNA was proposed by \_\_\_\_\_
12. \_\_\_\_\_ species of bacteria is involved in formation of yoghurt.
13. \_\_\_\_\_ resistance is brought about by modifications in crassulacean acid metabolism
14. Organism cloning is also known as \_\_\_\_\_
15. \_\_\_\_\_ is a fortified food product.

## III. Say True or False

16. Traditional Biotechnology is also known as kitchen technology.
17. Gas from biorefineries can be combusted to produce heat and power
18. A plantibody is produced by inserting a foreign antigen into a plant
19. Forensic entomology is the study of uniqueness of teeth.
20. Drug discovery involves lead optimization.

## IV Match the following

- |                             |   |                       |
|-----------------------------|---|-----------------------|
| 21. GM crop                 | - | Alcohol and Beverages |
| 22. Fermentation            | - | Meristem              |
| 23. Actively dividing cells | - | Tissue engineering    |
| 24. Xenotransplantation     | - | Green Biotechnology   |
| 25. Regenerative medicine   | - | Transgenic animal     |

Section - B

(5x15=75)

## Answer ALL the Questions

26. (a) Explain the emergence of modern Biotechnology.  
(or)  
(b) Summarize the types of Biotechnology.
27. (a) List and brief about fermented milk products.  
(or)  
(b) What are sweetening agents? Explain in detail.
28. (a) Interpret the role of Biotechnology in producing transgenic plants.  
(or)  
(b) Develop a detailed note on Biodegradation.
29. (a) Relate the development of Animal Biotechnology in improvising human welfare.  
(or)  
(b) Outline the industrial products of Biotechnology in day to day life.
30. (a) Explain aquaculture.  
(or)  
(b) Illustrate the steps in discovery of drugs.



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DEPARTMENT OF BIOTECHNOLOGY  
17VBTBB –BASICS IN BIOTECHNOLOGY -QUESTION PAPER  
PAPER II  
PRACTICAL: LAB IN BASICS IN BIOTECHNOLOGY

Duration: 3 Hrs

Max.Marks:100

## I MAJOR

(20 marks)

Perform Handling Method in microbiology from the given sample- A.

## II MINOR

(30 marks)

Determine the catalase from the given sample B.

Determine the oxidase from the given sample C.

Sample: *E.coli*

## III SET UP

(15 marks)

Identify the given set up D and comment on it

Set up D: Preservation of microorganisms

## IV SPOTTERS

(5X5=25 marks)

Identify the given spotters E, F, G, H, I and comment on it

E) Incubator

F) Inoculation loop

G) Microscope

H) *E.coli*

I) Lactophenol cotton blue


## V VIVA VOCE

(5 marks)

## VI RECORD

(5 marks)



  
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DEPARTMENT OF BIOTECHNOLOGY

17VBTBB - BASICS IN BIOTECHNOLOGY - MARK STATEMENT

S.No.	Reg. No	Theory - I	Theory - II	Result	Average	Grade
1	18UBIT001	60	62	61	Pass	B+
2	18UBIT002	58	66	62	Pass	B+
3	18UBIT003	77	58	68	Pass	B+
4	18UBIT004	56	60	58	Pass	B
5	18UBIT005	49	50	50	Pass	B
6	18UBIT006	50	53	52	Pass	B
7	18UBIT007	71	68	70	Pass	A
8	18UBIT008	58	56	57	Pass	B
9	18UBIT009	52	60	56	Pass	B
10	18UBIT010	80	66	73	Pass	A
11	18UBIT011	80	63	72	Pass	A
12	18UBIT012	69	57	63	Pass	B+
13	18UBIT013	55	58	57	Pass	B
14	18UBIT014	45	55	50	Pass	B
15	18UBIT015	56	60	58	Pass	B
16	18UBIT016	70	81	76	Pass	A
17	18UBIT017	68	63	66	Pass	B+
18	18UBIT018	48	47	48	Pass	C
19	18UBIT019	62	61	62	Pass	B+
20	18UBIT020	54	48	51	Pass	B
21	18UBIT021	50	72	61	Pass	B+
22	18UBIT022	45	62	54	Pass	B
23	18UBIT023	58	68	63	Pass	B+
24	18UBIT024	60	45	53	Pass	B
25	18UBIT025	61	66	64	Pass	B+
26	18UBIT026	58	65	62	Pass	B+
27	18UBIT027	57	69	63	Pass	B+
28	18UBIT028	67	72	70	Pass	A
29	18UBIT029	77	72	75	Pass	A
30	18UBIT030	65	77	71	Pass	A
31	18UBIT031	83	66	75	Pass	A
32	18UBIT032	54	65	60	Pass	B+
33	18UBIT033	54	65	60	Pass	B+
34	18UBIT034	51	64	58	Pass	B
35	18UBIT035	77	62	70	Pass	A
36	18UBIT036	66	67	67	Pass	B+
37	18UBIT037	45	75	60	Pass	B+
38	18UBIT038	89	70	80	Pass	A+
39	18UBIT039	42	70	56	Pass	B
40	18UBIT040	61	68	65	Pass	B+



  
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41	18UBIT041	69	71	70	Pass	A
42	18UBIT042	61	78	70	Pass	A
43	18UBIT043	78	64	71	Pass	A
44	18UBIT044	62	69	66	Pass	B+
45	18UBIT045	55	65	60	Pass	B+
46	18UBIT046	76	69	73	Pass	A
47	18UBIT047	51	70	61	Pass	B+
48	18UBIT048	46	49	48	Pass	C
49	18UBIT049	74	69	72	Pass	A
50	18UBIT050	70	69	70	Pass	A
51	18UBIT051	54	65	60	Pass	B+
52	18UBIT052	56	71	64	Pass	B+
53	18UBIT053	52	70	61	Pass	B+

90-100	A++ - Outstanding	60-69	B+ - Good
80-89	A+ - Excellent	50-59	B - Average
70-79	A - Very Good	40-49	C - Satisfactory

## SUBJECT DETAILS

CODE	SUBJECT	MAX.MARKS
THEORY - I	ELEMENTAL BIOTECHNOLOGY	100
PRACTICALS	LAB IN BASIC BIOTECHNOLOGY	100

*R. S. Cindley*  
Course Coordinator

*R. S. Cindley*  
Head of the Department  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF BIOTECHNOLOGY  
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*R. S. Cindley*  
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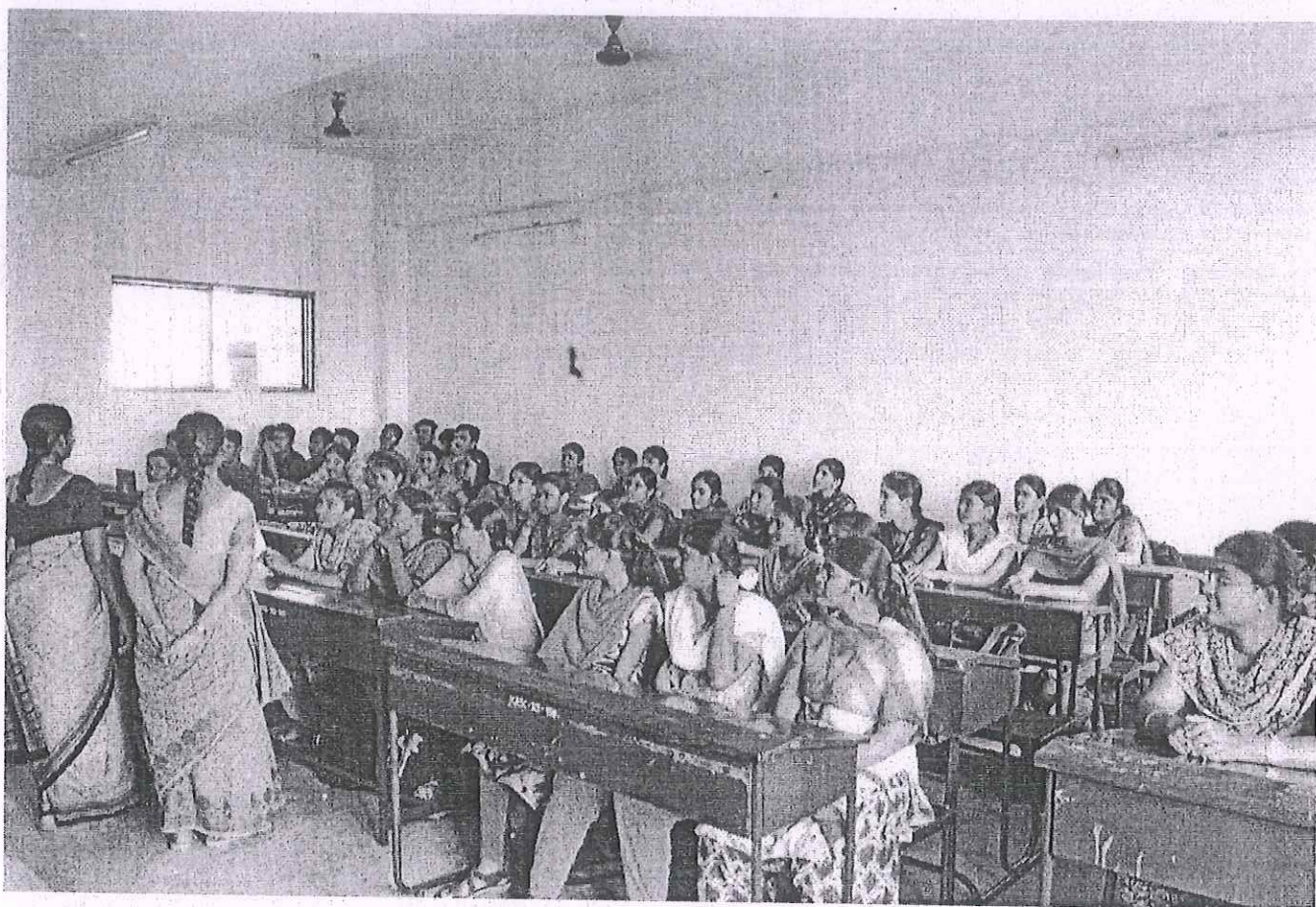
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DEPARTMENT OF BIOTECHNOLOGY

17VBTBB –BASICS IN BIOTECHNOLOGY – PHOTOGRAPH



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DEPARTMENT OF BIOTECHNOLOGY


17VBTBB –BASICS IN BIOTECHNOLOGY – STUDENTS FEEDBACK

Name of the Student	
Register Number	
Department	
Year	

Parameters	Yes	No	
The Course content was in line with my expectations	Yes	No	
General content of the Course	Excellent	Good	Average
The Course provided additional knowledge and skill	Yes	No	
Well-designed Practical sessions	Yes	No	
Schedule of the classes and other relevant details have been informed promptly	Yes	No	
Course materials provided were useful	Yes	No	
Provides scope for self-employment and fulfills the industrial needs	Yes	No	

Student Signature



  
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DEPARTMENT OF BIOTECHNOLOGY

17VBTBB -BASICS IN BIOTECHNOLOGY - STUDENTS FEEDBACK

Name of the Student	Praveen.M
Register Number	18UBIT032
Department	Biotechnology
Year	I-B.Sc

Parameters	Yes	No	
The Course content was in line with my expectations	Yes <sup>✓</sup>	No	
General content of the Course	Excellent <sup>✓</sup>	Good	Average
The Course provided additional knowledge and skill	Yes	No <sup>✓</sup>	
Well-designed Practical sessions	Yes <sup>✓</sup>	No	
Schedule of the classes and other relevant details have been informed promptly	Yes <sup>✓</sup>	No	
Course materials provided were useful	Yes	No <sup>✓</sup>	
Provides scope for self-employment and fulfills the industrial needs	Yes <sup>✓</sup>	No	

*Praveen*  
Student Signature



*al*  
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DEPARTMENT OF BIOTECHNOLOGY

17VBTBB -BASICS IN BIOTECHNOLOGY - STUDENTS FEEDBACK

Name of the Student	JAISHA .S
Register Number	18UBIT015
Department	BIOTECHNOLOGY
Year	I -B.Sc

Parameters	Yes	No	
The Course content was in line with my expectations	Yes <sup>✓</sup>	No	
General content of the Course	Excellent	Good <sup>✓</sup>	Average
The Course provided additional knowledge and skill	Yes <sup>✓</sup>	No	
Well-designed Practical sessions	Yes <sup>✓</sup>	No	
Schedule of the classes and other relevant details have been informed promptly	Yes	No <sup>✓</sup>	
Course materials provided were useful	Yes <sup>✓</sup>	No	
Provides scope for self-employment and fulfills the industrial needs	Yes	No <sup>✓</sup>	

*Jaisha S*  
Student Signature



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## KASC ACADEMY OF EXCELLENCE

### Certificate

This Certificate is awarded to



MIRUTHULA P

I B.Sc BIOTECHNOLOGY

for the successful completion of the Certificate Course in

BASICS IN BIOTECHNOLOGY

with B+ Grade conducted by the

Department of Biotechnology

during the Academic Year 2018 -2019



*R.S. [Signature]*  
Course Coordinator

*[Signature]*  
Convenor  
Academy of Excellence

*[Signature]*  
Principal Correspondent

90 - 100 A++ - Outstanding  
80 - 89 A+ - Excellent

70 - 79 A - Very Good  
60 - 69 B+ - Good

50 - 59 B - Average  
40 - 49 C - Satisfactory



*[Signature]*  
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