

“Dissemination of Education for Knowledge, Science and Culture”
- Shikshanmaharshi Dr. Bapuji Salunkhe

**Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (Empowered Autonomous)**

Department of Microbiology

Academic year 2023-24

Internal Exam B.Sc I, Sem II

Notice

Date: 07/03/2024

All the students of B.Sc. I Microbiology are hereby informed that, the “**Semester-II internal exam**” is scheduled on **Thursday, 28th March, 2024 at 10.00 a.m** in class room no.64. Please make it convenient to be present on time. Topics are as follow –

Sr.No.	Title of Paper	Date	Time	Topic
1	DSC 03 MIC 21 – Basic Biochemistry	28/03/2024	10.00 am - 10 .50 am	All syllabus covered till 07/03/2024
2	DSC 03 MIC 22 – Microbial Nutrition & techniques		10.50 am – 11.40 am	All syllabus covered till 07/03/2024

Question Paper Format:

- Q.1 Select the correct alternative from following. **3 marks**
Q. 2 Long question (Any 1) **8 marks**
Q.3 Write a short notes on (Any 1) **4 marks**

Total- 15 marks



Dr. G.K.Sontakke

HEAD

**DEPARTMENT OF MICROBIOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)**

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

Department of Microbiology

B.Sc. Part- I (SEM -II)

Paper - Basic Biochemistry

Internal Examination - 2023-24

Day – Saturday

Time- 11.30 a.m.- 12.20 p.m.

Date – 30/03/2024

Marks - 15

Q.1 Select the correct alternative from the following.

3 Marks

1. _____ of the following is an example of disaccharide.

- a. Glucose b. Fructose c. Lactose d. Ribose

2. The glucose monomer in starch are linked together by _____ glycosidic linkage.

- a. α - 1,4 b. α – 1,6 c. α – 1,4 & α – 1,6 d. β – 1,4

3. _____ is an example of Sulphur containing amino acid.

- a. Glycine b. Lysin c. Methionine d. Proline

Q.2. Long answer question. (Any 1)

8 Marks

1. Discuss in detail polysaccharides with suitable example & biological significance.

2. Discuss in secondary structures of proteins. *

Q.3. Write a Short note on. (Any 1)

4 Marks

1. Monosachharides

2. General properties of amino acids

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

Department of Microbiology

B.Sc. Part- I (SEM -II)

Paper – Microbial Nutrition & techniques

Internal Examination - 2023-24

Day – Saturday

Time- 12.20 p.m.- 1.10 p.m.

Date – 30/03/2024

Marks - 15

Q.1 Select the correct alternative from the following.

3 Marks

1. Strictly aerobic organisms cannot grow in absence of free _____

a. Hydrogen b. Nitrogen c. carbon dioxide d. oxygen

2. In culture media _____ is added as solidifying agent.

a. NaCl b. peptone c. Yeast extract d. Agar-agar

3. _____ is required for the nucleic acid synthesis.

a. Potassium b. Sodium c. Calcium d. Phosphorous

Q.2.Long answer question. (Any 1)

8 Marks

1. Write a long answer n streak plate & pour plate technique.

2. Discuss in detail nutritional requirement about carbon, nitrogen, sulphur & phosphorous by bacteria.

Q.3. Write a Short note on. (Any 1)

4 Marks

1. Photoautotrophs

2. Anaerobic Jar (Gas Pack System)

Vivekanand College, Kolhapur (Empowered Autonomous)

Department Of Microbiology

B.Sc I Sem II

Internal Exam 23-24 Presenty

Sr. No.	Name of Student	Roll No.	DSC 03MIC 21	DSC03MIC 22
1	Bakale Poonam Raju	7465	P.R. Bakale	P.R. Bakale
2	Bansode Ankita Nagnath	7466	Bansode	Bansode
3	Dongare Samruddhi Laxman	7467	Subangare	Subangare
4	★ Ghangade Pratiksha Vijay	7468		
5	Jadhav Harshali Uttam	7469	Harshali	Harshali
6	Mullani Sophiya	7470	Amruta	Amruta
7	Parit Amruta Eknath	7471	Amruta	Amruta
8	Patil Achal Bhaskar	7472	ABPati	ABPati
9	Patil Janhavi Ashok	7473	Patil	Patil
10	Patil Mrujala Maleji	7474	Mrujala	Mrujala
11	Patil Sanjyoti Ramchandra	7475	Sanjyoti	Sanjyoti
12	Patil Vidula Manik	7476	Patil	Patil
13	Shinde Janhvi Nitin	7477	J.N.S	J.N.S
14	Teli Prajakta Namdev	7478	P.N.Teli	P.N.Teli
15	Chougale Sakshi Rajesh	7479	Sehangale	Sehangale
16	Ingale Abhishek Angad	7480	Abhishek	Abhishek
17	Mane Sakshi Manohar	7481	Mane	Mane
18	Musute Bhagyashree D.	7482	Basude	Basude
19	Rathi Sanjana Pavankumar	7483	Sanjana	Sanjana
20	Watwade Saurabh Sanjay	7484	Saurabh	Saurabh
21	Akole Poonam Anil	7485	Poonam	Poonam
22	Amane Aditya Avadhut	7486	Aditya	Aditya
23	Bamane Durgesh baban	7487	Durgesh	Durgesh
24	Dave Dhruv Govind	7488	Dhruv	Dhruv
25	Divase Tanishka Rahul	7489	Tanishka	Tanishka
26	Ghurunge Archita C.	7490	Archita	Archita
27	Gole Samruddhi Dattatray	7491	Samruddhi	Samruddhi
28	Gurav Gouri Vidyasagar	7492	Gurav	Gurav
29	Jadhav Prachi Ramesh	7493	Prachi	Prachi
30	Jambhale Rajvardhan	7494	Rajvardhan	Rajvardhan
31	Kadam kalyani Prakash	7495	Kalyani	Kalyani
32	Kadatare Manthn Vinay	7496	Manthn	Manthn
33	kamble Pranav Suresh	7497		
34	Kamble Sanika Nagesh	7498	Sanika	Sanika
35	Karalkar Hardik Arun	7500	Hardik	Hardik
36	Khatib Juyera Ilai	7500	Juyera	Juyera
37	Kumbhar Rutuja Suresh	7501	Rutuja	Rutuja
38	Mahadik Rajveer Suraj	7502	Rajveer	Rajveer
39	Mane Sanjana Dattatray	7503	Sanjana	Sanjana
40	Marathe Aradhana Satish	7504	Aradhana	Aradhana
41	Matre Pooja Shankar	7505	Pooja	Pooja
42	Nirankari Tarana Vishnudas	7506	Tarana	Tarana
43	Patil janhavi Nitin	7507	Janhavi	Janhavi

44	Patil Maheshwari Nandkumar	7508		
45	Patil Priti Pramod	7509		
46	Pail Swarup Ramchandra	7510		
47	Pawar Samiksha Santosh	7511		
48	Pidwani Disha Jairamdas	7512	Disha	Disha
49	Pishte Sanika vijay	7513		
50	Ranbhare Sujal Rama	7514		
51	Rode Kaveri Ravindra	7515		
52	Shahapure Anirudha Uijaykumar	7516		
53	Shaikh Jiya Ajij	7517	Shaikh	Shaikh
54	Shaikh Sadiya Shakil	7518	Shaikh	Shaikh
55	Shetti Omkar Vidyasagar	7519		
56	Suryavanshi Siddhi Satish	7520	Siddhi	Siddhi
57	Sutar Dhanashree Rajendra	7521		
58	Swami Sanket Kalayya	7522		
59	Ugave Sanika Kashinath	7523	S.K.UGAVE	S.K.UGAVE

Teacher incharge- S.A.Pise -

Subject Wise Student Blank Marks Entry

Session: NEP April-May 2024

Stream: B.Sc.

Standard: B.SC. - FY

Semester: SEM - II

Print Date : 27-04-2024

Subject: BASIC BIOCHEMISTRY-I (DSC03MIC21)

Sub-Subject: CIE

Max Marks: 10

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2023037464	454279	3007988	BANSODE ANKITA NAGANATH	
2	2023037463	454532	3010337	BAKALE POONAM RAJU	2
3	2023037465	454534	3007161	DONGARE SAMRUDDHI LAXMAN	5
4	2023037467	454536	3006936	JADHAV HARSHALI UTTAM	10
5	2023037468	454537	3010604	MULLANI SOPHIYA WASIMRAJA	7
6	2023037469	454538	3006932	PARIT AMRUTA EKNATH	4
7	2023037470	454539	3008190	PATIL ACHAL BHASKAR	8
8	2023037471	454540	3007370	PATIL JANHAVI ASHOK	8
9	2023037472	454541	3007197	PATIL MRUJALA MALOJI	9
10	2023037473	454542	3009764	PATIL SANJYOTI RAMCHANDRA	9
11	2023037474	454543	3007201	PATIL VIDULA MANIK	8
12	2023037475	454544	3009227	SHINDE JANHVI NITIN	7
13	2023037476	454545	3007158	TELI PRAJAKTA NAMDEV	5
14	2023037477	454546	3008062	CHOUGALE SAKSHI RAJESH	5
15	2023037478	454547	3008085	INGALE ABHISHEK ANGAD	7
16	2023037479	454548	3008226	MANE SAKSHI MANOHAR	3
17	2023037480	454549	3008438	MASUTE BHAGYASHREE DHANYAKUMAR	7
18	2023037481	454550	3007093	RATHI SANJANA PAVANKUMAR	9
19	2023037570	454551	3008084	WATWADE SAURABH SANJAY	7
20	2023037483	454552	3011316	AKKOLE POONAM ANIL	1
21	2023037484	454553	3006949	AMANE ADITYA AVDHUT	5
22	2023037485	454554	3009528	BAMANE DURGESH BABAN	4
23	2023037486	454555	3010367	DAVE DHRUV GOVIND	5
24	2023037487	454556	3007525	DIVASE TANISHKA RAHUL	5
25	2023037488	454557	3006979	GHARUNGE AARCHITA CHANDRKANT	5
26	2023037489	454558	3007395	GOLE SAMRUDDHI DATTATRAY	5
27	2023037490	454559	3010059	GURAV GOURI VIDYASAGAR	5
28	2023037491	454560	3008135	JADHAV PRACHI RAMESH	9
29	2023037492	454561	3010582	JAMBHALE RAJVARDHAN VISHWAS	5
30	2023037493	454562	3010278	KADAM KALYANI PRAKASH	7
31	2023037494	454563	3006956	KADATARE MANTHAN VINAY	7
32	2023037496	454565	3007373	KAMBLE SANIKA NAGESH	4
					5

VIVEKANAND COLLEGE FOR WOMEN (EMPOWERED AUTONOMOUS)
2130, E Ward, Tarabai Park, Kolhapur, Maharashtra 416003

Subject Wise Student Blank Marks Entry

Session: NEP April-May 2024

Subject: BASIC BIOCHEMISTRY-I (DSC03MIC21)

Stream: B.Sc.

Standard: B.SC. - FY

Sub-Subject: CIE

Semester: SEM - II

Max Marks: 10

Print Date : 27-04-2024

Page No :Page 1 of 1

33	2023037497	454566	3008010	KARALKAR HARDIK ARUN	5
34	2023037498	454567	3006989	KHATIB JUYERA ILAI	5
35	2023037499	454568	3008325	KUMBHAR RUTUJA SURESH	6
36	2023037500	454569	3006926	MAHADIK RAJVEER SURAJ	4
37	2023037501	454570	3009717	MANE SANJANA DATTATRAY	5
38	2023037502	454571	3006886	MARATHE ARADHANA SATISH	7
39	2023037503	454572	3009247	MATRE POOJA SHANKAR	9
40	2023037504	454573	3010132	NIRANKARI TARUNA VISHNUDAS	9
41	2023037505	454574	3006935	PATIL JANHAVI NITIN	9
42	2023037507	454576	3008505	PATIL PRITI PRAMOD	8
43	2023037508	454577	3007849	PATIL SWARUP RAMCHANDRA	3
44	2023037509	454578	3009949	PAWAR SAMIKSHA SANTOSH	3
45	2023037510	454579	3010997	PIDWANI DISHA JAIRAMDAS	5
46	2023037511	454580	3006934	PISHTE SANIKA VIJAY	9
47	2023037513	454582	3006943	RODE KAVERI RAVINDRA	9
48	2023037514	454583	3007732	SHAHAPURE ANIRUDHA VIJAYKUMAR	6
49	2023037515	454584	3008476	SHAIKH JIYA AJIJ	4
50	2023037516	454585	3008241	SHAIKH SADIYA SHAKIL	6
51	2023037517	454586	3010121	SHETTI OMKAR VIDYASAGAR	3
52	2023037518	454587	3007706	SURYAVANSHI SIDDHI SATISH	5
53	2023037519	454588	3006942	SUTAR DHANASHREE RAJENDRA	4
54	2023037520	454589	3008344	SWAMI SANKET KALAYYA	8
55	2023037521	454590	3006925	UGAVE SANIKA KASHINATH	9

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE KOI HAPIR (EMPOWERED AUTONOMOUS)
 2130, E Ward, Tarabai Park, Kolhapur, Maharashtra 416003

Subject Wise Student Blank Marks Entry

Session: NEP April-May 2024

Stream: B.Sc.

Standard: B.SC. - FY

Semester: SEM - II

Print Date : 27-04-2024

Subject: MICROBIAL NUTRITION AND TECHNIQUES
(DSC03MIC22)

Sub-Subject: CIE

Max Marks: 10

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2023037464	454279	3007988	BANSODE ANKITA NAGANATH	0
2	2023037463	454532	3010337	BAKALE POONAM RAJU	8
3	2023037465	454534	3007161	DONGARE SAMRUDDHI LAXMAN	9
4	2023037467	454536	3006936	JADHAV HARSHALI UTTAM	9
5	2023037468	454537	3010604	MULLANI SOPHIYA WASIMRAJA	8
6	2023037469	454538	3006932	PARIT AMRUTA EKNATH	9
7	2023037470	454539	3008190	PATIL ACHAL BHASKAR	10
8	2023037471	454540	3007370	PATIL JANHAVI ASHOK	9
9	2023037472	454541	3007197	PATIL MRUJALA MALOJI	8
10	2023037473	454542	3009764	PATIL SANJYOTI RAMCHANDRA	9
11	2023037474	454543	3007201	PATIL VIDULA MANIK	7
12	2023037475	454544	3009227	SHINDE JANHVI NITIN	7
13	2023037476	454545	3007158	TELI PRAJAKTA NAMDEV	8
14	2023037477	454546	3008062	CHOUGALE SAKSHI RAJESH	8
15	2023037478	454547	3008085	INGALE ABHISHEK ANGAD	4
16	2023037479	454548	3008226	MANE SAKSHI MANOHAR	7
17	2023037480	454549	3008438	MASUTE BHAGYASHREE DHANYAKUMAR	9
18	2023037481	454550	3007093	RATHI SANJANA PAVANKUMAR	9
19	2023037570	454551	3008084	WATWADE SAURABH SANJAY	3
20	2023037483	454552	3011316	AKKOLE POONAM ANIL	9
21	2023037484	454553	3006949	AMANE ADITYA AVDHUT	7
22	2023037485	454554	3009528	BAMANE DURGESH BABAN	9
23	2023037486	454555	3010367	DAVE DHRUV GOVIND	9
24	2023037487	454556	3007525	DIVASE TANISHKA RAHUL	9
25	2023037488	454557	3006979	GHARUNGE AARCHITA CHANDRKANT	8
26	2023037489	454558	3007395	GOLE SAMRUDDHI DATTATRAY	6
27	2023037490	454559	3010059	GURAV GOURI VIDYASAGAR	10
28	2023037491	454560	3008135	JADHAV PRACHI RAMESH	7
29	2023037492	454561	3010582	JAMBALE RAJVARDHAN VISHWAS	8
30	2023037493	454562	3010278	KADAM KALYANI PRAKASH	10
31	2023037494	454563	3006956	KADATARE MANTHAN VINAY	8
32	2023037496	454565	3007373	KAMBLE SANIKA NAGESH	9

Subject Wise Student Blank Marks Entry

Session: NEP April-May 2024

Subject: MICROBIAL NUTRITION AND TECHNIQUES

Stream: B.Sc.

(DSC03MIC22)

Standard: B.SC. - FY

Sub-Subject: CIE

Semester: SEM - II

Max Marks: 10

Print Date : 27-04-2024

Page No :Page 1 of 1

33	2023037497	454566	3008010	KARALKAR HARDIK ARUN	8
34	2023037498	454567	3006989	KHATIB JUJERA ILAI	9
35	2023037499	454568	3008325	KUMBHAR RUTUJA SURESH	9
36	2023037500	454569	3006926	MAHADIK RAJVEER SURAJ	7
37	2023037501	454570	3009717	MANE SANJANA DATTATRAY	7
38	2023037502	454571	3006886	MARATHE ARADHANA SATISH	7
39	2023037503	454572	3009247	MATRE POOJA SHANKAR	7
40	2023037504	454573	3010132	NIRANKARI TARUNA VISHNUDAS	9
41	2023037505	454574	3006935	PATIL JANHAVI NITIN	9
42	2023037507	454576	3008505	PATIL PRITI PRAMOD	8
43	2023037508	454577	3007849	PATIL SWARUP RAMCHANDRA	8
44	2023037509	454578	3009949	PAWAR SAMIKSHA SANTOSH	7
45	2023037510	454579	3010997	PIDWANI DISHA JAIRAMDAS	8
46	2023037511	454580	3006934	PISHTE SANIKA VIJAY	7
47	2023037513	454582	3006943	RODE KAVERI RAVINDRA	8
48	2023037514	454583	3007732	SHAHAPURE ANIRUDHA VIJAYKUMAR	7
49	2023037515	454584	3008476	SHAIKH JIYA AJIJ	9
50	2023037516	454585	3008241	SHAIKH SADIYA SHAKIL	8
51	2023037517	454586	3010121	SHETTI OMKAR VIDYASAGAR	2
52	2023037518	454587	3007706	SURYAVANSHI SIDDHI SATISH	7
53	2023037519	454588	3006942	SUTAR DHANASHREE RAJENDRA	5
54	2023037520	454589	3008344	SWAMI SANKET KALAYYA	7
55	2023037521	454590	3006925	UGAVE SANIKA KASHINATH	10

**Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (Empowered Autonomous)**

Academic year 2023-24

Internal Exam B.Sc II, Sem III

Notice

Date: 11/10/2023


All the students of B.Sc. II Microbiology are hereby informed that, the "Semester-III internal exam" is scheduled on **Wednesday, 18th October, 2023 at 9.00 a.m** in class room no.64. Please make it convenient to be present on time. Topic are as follow –

Sr.No.	Title of Paper	Date	Time	Topic
1	Paper V – Microbial Physiology & Metabolism	18/10/2023	9.00 am– 9.50 am	All syllabus covered till 9th October 2023
2	Paper VI – Industrial & Applied Microbiology		9.50am-10.40 am	All syllabus covered till 9th October 2023

Question Paper Format :

- Q.1 Select the correct alternative from following. 3 marks
Q. 2 Long question (Any 1) 8 marks
Q.3 Write a short notes on (Any 1) 4 marks

Total- 15 marks


Dr. G.K.Sontakke
Incharge Head
Department Of Microbiology
Vivekanand College, Kolhapur.
(Autonomous)

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Microbiology

Academic Year 2023-24

B. Sc. II Presenty

Internal Exam

Date-18/10/2023

Sr. No.	Name	Roll No.	Paper V	Paper VI
1	Abreange Vaishnavi Vinod	7843	v.v. Abreange	v.v. Abreange
2	Bhosle Vedika Sudhir	7844	Wadga	Wadga
3	Chougale Sanika Vishnu	7845	Suc	Suc
4	Dindayal Prabodhini Raju	7846	P.R. Dindayal	PR. Dindayal
5	Dinde Ankita Rangrao	7847	A.R.D	A.R.D
6	Gaikwad Divya Sanjay	7848	Gaikwad	Gaikwad
7	Gaikwad Nikita Nandkumar	7849	Gaikwad	Gaikwad
8	Gurav Mansi Sunil	7850	Gurav	Gurav
9	Hajare Aishwarya Ganesh	7851	Hajare	Hajare
10	Hardikar Yogi Ashutosh	7852	Hardikar	Hardikar
11	Harshe Arpita Ashok	7853	Harshe	Harshe
12	Jadhav Karan Dipak	7854	KJadhav	KJadhav
13	Jadhav Vinayak Sanjay	7855	Jadhav	Jadhav
14	Jasud Rutuja Tanaji	7856	Jasud	Jasud
15	Jevrani Simran Anil	7857	Jevrani	Jevrani
16	Kachare Ishwari Pradeep	7858	Kachare	Kachare
17	Kamat Sanskruti Santosh	7859	Kamat	Kamat
18	Khanvilkar Anjali Hemant	7860	Khanvilkar	Khanvilkar
19	Kharade Sanchit Sachin	7861	Kharade	Kharade
20	Khot Vaishnavi Jitendra	7862	Khot	Khot
21	Korane Harshad Mahesh	7863	Korane	Korane
22	Kulkarni Sai Vivek	7864	Kulkarni	Kulkarni
23	Lad Anjali Vijay	7865	Lad	Lad
24	Ligade Smeet Sunil	7866	Ligade	Ligade
25	Majgavkar Sanika Sagar	7867	Majgavkar	Majgavkar
26	Mali Prachi Sanjay	7868	Mali	Mali
27	Mane Rohan Baban	7869	Mane	Mane
28	Mujawar Aabida Altaf	7870	Mujawar	Mujawar
29	Murti Vanshita Sanjay	7871	Murti	Murti
30	Parulekar Diksha Devdatta	7872	Parulekar	Parulekar
31	Patil Avantika Arun	7873	Patil	Patil

V
10
7
12
7
10
6
10
10
7
9
6
4
10
10
7
11
7
06
12
06
7
9
7
6
8
6
9
11
12
7

9
12
12
10
8
7
8
6
4
6
4
6
8
9
3
12
2
2
10
11
10
00
5
9
12
11
10
15
12
13
08

12	32	Patil Kartigraj Bhagwan	7874	Patil	Patil	10
6	33	Patil Sammed Annaso	7875	Patil	Patil	12
10	34	Patil Sharwari Yuvraj	7876	Patil	Patil	9
9	35	Patil Suhani Sadashiv	7877	Patil	Patil	12
8	36	Powar Diya Kiran	7878	Powar	Powar	12
10	37	Prabhu Savali Shivaji	7879	Prabhu	Prabhu	10
10	38	Shaikh Mushfira Balu	7880	Shaikh	Shaikh	13
12	39	Shaikh Rizwan firoj	7881	Shaikh	Shaikh	13
0	40	Shelke Yogesh Balu	7882	Shelke	Shelke	5
7	41	Shewale Prithviraj Subhash	7883	Shewale	Shewale	0
11	42	Sonule Sushant Krishnat	7884	Sonule	Sonule	11
12	43	Sutar Jayshri Krishnat	7885	Sutar	Sutar	7
12	44	Wadkar Samrudhi Dhanaji	7886	Wadkar	Wadkar	11
7	45	Yadav Sushant Harishchandra	7887	Yadav	Yadav	5
6	46	Yatam Ashutosh Bhagvan	7931	Yatam	Yatam	3
7	47	Patil Tejas Tukaram				
7	48	Todkar Nirjara Shivaji	7917	Todkar	Todkar	7
6	49	Sunika Pradeep chavan	7924	Sunika	Sunika	5

[Faint, illegible handwritten notes and signatures in blue ink, likely bleed-through from the reverse side of the page.]

**Shri. Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (Empowered Autonomous)**

Department Of Microbiology

B.Sc II Sem III Internal Exam 2023-24

Paper V

Q. Multiple Choice Question.

(3)

1. Microbial growth curve shows a _____ curve.

- a) Bell shaped
b) Hyperbolic
c) Parabolic
d) Sigmoidal

2. Total yield of ATP by ED pathway is _____.

- a) 2
b) 8
c) 1
d) 4

3. In _____ phase growth rate is zero.

- a) Lag
b) Log
c) Stationary
d)

Sparger

Q. Long Answer Questions. (Any 1)

(8)

1. Write in detail catabolism of glucose by EMP pathway.
2. Explain in detail methods of measurement of growth by cell mass.

Q. Write a Short Note on. (Any 1)

(4)

1. Significance of HMP pathway
2. Log phase

"Education for Knowledge, Science and Culture"
- Shikshanmaharshi Dr. Bapuji Salunkhe

Shri. Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (Empowered Autonomous)

Department Of Microbiology

B.Sc II Sem III Internal Exam 2023-24

Paper VI

Q. Multiple Choice Question.

1. Antifoam agent collapse the foam & thus increase the _____ transfer rate of fermentation medium. (3)

a) CO₂

b) N₂

c) O₂

d) H₂

2. In agarose gel electrophoresis _____ is used to stain DNA molecule.

a) Bromophenol blue

b) Xylene cyanol

c) Ethidium bromide

d) Phenol red

3. In fermentor, the top portion left without broth is called as _____

a) Shaft

b) Headspace

c) Impeller

d) Sparger

Q. Long Answer Questions. (Any 1)

1. Explain in detail types of fermentation. (8)

2. Give a brief account on tabulation.

Q. Wright a Short Note on. (Any 1)

1. Graphical presentation of data (4)

2. Design of fermentor

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)

2130, E Ward, Tarabai Park, Kolhapur, Maharashtra 416003

Subject Wise Student Blank Marks Entry

Session: NOVEMBER-DECEMBER 2023

Subject: MICROBIOLOGY (DSC-1010C)

Stream: B.Sc.

Standard: B.SC. - SY

Sub-Subject: CIE

Semester: SEM - III

Max Marks: 30

Print Date : 21-12-2023

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2022037490	52670	3002460	ABRANGE VAISHNAVI VINOD	19
2	2022037498	52686	3002517	DINDAYAL PRABODHINI RAJU	17
3	2021037199	52697	2952460	HARSHE ARPITA ASHOK	10
4	2022037506	52699	3002950	JADHAV KARAN DIPAK	12
5	2022037598	52703	3006891	JEVRANI SIMRAN ANIL	19
6	2022037510	52705	3002886	KAMAT SANSKRUTI SANTOSH	9
7	2022037541	52775	3003738	YOGESH BALU SHELKE	12
8	2022037544	52785	3003060	TODKAR NIRJARA SHIVAJI	14
9	2022037547	52792	3003843	SUSHANT HARISHCHANDRA YADAV	9
10	2022037548	52793	3002996	YATAM ASHUTOSH BHAGVAN	19
11	2022037573	52849	3006401	BHOSALE VEDIKA SUDHIR	19
12	2022037496	52850	3003285	CHOUGULE SANIKA VISHNU	24
13	2022037499	52851	3003043	DINDE ANKITA RANGRAO	18
14	2022037500	52852	3002660	DIVYA SANJAY GAIKWAD	13
15	2022037501	52853	3002494	GAIKWAD NIKITA NANDKUMAR	18
16	2022037504	52854	3002813	GURAV MANSI SUNIL	16
17	2022037505	52855	3004046	HAJARE AISHWARYA GANESH	12
18	2022037549	52856	3006176	HARDIKAR YOGI ASHUTOSH	15
19	2022037597	52857	3006864	JADHAV VINAYAK SANJAY	19
20	2022037508	52858	3004320	RUTUJA TANAJI JASUD	13
21	2022037509	52859	3003964	KACHARE ISHWARI PRADEEP	13
22	2022037513	52860	3003305	KHANVILKAR ANJALI HEMANT	16
23	2022037515	52861	3003296	KHARADE SANCHIT SACHIN	24
24	2022037516	52862	3003636	VAISHNAVI JITENDRA KHOT	17
25	2022037518	52863	3003206	KORANE HARSHAD MAHESH	17
26	2022037519	52864	3002622	KULKARNI SAI VIVEK	9
27		52865	3011310	LAD ANJALI VIJAY	12
28	2022037520	52866	3003136	LIGADE SMEET SUNIL	15
29	2022037525	52867	3006592	MAJGAVKAR SANIKA SAGAR	17
30	2022037576	52868	3006453	MALI PRACHI SANJAY	17
31	2022037521	52869	3002486	MANE ROHAN BABAN	19
32	2022037523	52870	3002484	AABIDA ALTAF MUJAWAR	26
33	2022037526	52871	3003066	MURTI VANSHITA SANJAY	21
34	2022037528	52872	3002716	PARULEKAR DIKSHA DEVDATTA	25
35	2022037529	52873	3003605	PATIL AVANTIKA ARUN	15
36	2022037533	52874	3006659	PATIL KARTIKRAJ BHAGAVAN	22
37		52875	3011312	PATIL SAMMED ANNASO	18
38	2022037532	52876	3003644	PATIL SHARWARI YUVRAJ	19
39	2022037534	52877	3002994	PATIL SUHANI SADASHIV	21
40	2022037537	52878	3003308	POWAR DIYA KIRAN	20
41	2022037538	52879	3003238	PRABHU SAVALI SHIVAJI	20
42	2022037540	52880	3002841	SHAIKH MUSHFIRA BALU	23
43	2022037445	52881	3002792	SHAIKH RIJWAN FIROJ	25
44	2022037542	52882	3002603	SHEWALE PRITHVIRAJ SUBHASH	8
45	2022037568	52883	3006379	SONULE SUSHANT KRISHNAT	22
46		52884	3011325	SUTAR JAYSHRI KRUSHNAT	20
47	2022037546	52885	3003262	WADKAR SAMRUDHI DHANAJI	23
48		52909	3011684	CHAVAN SANIKA PRADEEP	12

Ms. S.A. Pise. - *[Signature]*

Vivekanand College (Autonomous), Kolhapur

Department of Microbiology

Notice of Internal Exam

B.Sc II, Sem IV

Date: 5/4/2023

All the students of B.Sc. II Microbiology are hereby informed that, the "Semester-IV internal exam" is scheduled on **Tuesday, 18th April, 2023** at **10.00 p.m** in class room no.64. Please make it convenient to be present on time. Topic are as follow –

Sr.No.	Title of Paper	Topic
1	Paper VII : Microbial Genetics & Molecular Biology	All syllabus covered till 5 April 2023
2	Paper VIII : Basics in Medical Microbiology & Immunology	All syllabus covered till 5 April 2023

Question Paper Format : (Same format for both papers)

Q.1 Select the correct alternative from the following. 5 marks

Q. 2 Long question (Any 1) 10 marks

Q.3 Write a short notes on (Any 1) 5 marks

Total- 20 marks


incharge Head
Department Of Microbiology
Vivekanand College, Kolhapur.
(Autonomous)

Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (Empowered Autonomous)
 Department of Microbiology
 Academic Year 2023-24
 B. Sc. II Internal Exam

Attendance Sheet

Date-01/04/24

Sr. No.	Name	Roll No.	Paper VII	Paper VIII
1	Abreange Vaishnavi Vinod	7843	<u>vr. Abreange</u>	<u>v.v. Abreange</u>
2	Bhosle Vedika Sudhir	7844		
3	Chougale Sanika Vishnu	7845	<u>sva</u>	<u>sva</u>
4	Dindayal Prabodhini Raju	7846	<u>P.R. Dindayal</u>	<u>P.A. Dindayal</u>
5	Dinde Ankita Rangrao	7847	<u>A.R.D</u>	<u>A.R.D</u>
6	Gaikwad Divya Sanjay	7848	<u>Divya Gaikwad</u>	<u>Divya Gaikwad</u>
7	Gaikwad Nikita Nandkumar	7849	<u>Nikita Gaikwad</u>	<u>Nikita Gaikwad</u>
8	Gurav Mansi Sunil	7850	<u>Gurav Mansi</u>	<u>Gurav Mansi</u>
9	Hajare Aishwarya Ganesh	7851	<u>Aishwarya Hajare</u>	<u>Aishwarya Hajare</u>
10	Hardikar Yogi Ashutosh	7852	<u>Yogi Hardikar</u>	<u>Yogi Hardikar</u>
11	Harshe Arpita Ashok	7853	<u>Arpita Harshe</u>	<u>Arpita Harshe</u>
12	Jadhav Karan Dipak	7854	<u>Karan Jadhav</u>	<u>Karan Jadhav</u>
13	Jadhav Vinayak Sanjay	7855	<u>Vinayak Jadhav</u>	<u>Vinayak Jadhav</u>
14	Jasud Rutuja Tanaji	7856	<u>Rutuja Jasud</u>	<u>Rutuja Jasud</u>
15	Jevrani Simran Anil	7857	<u>Simran Jevrani</u>	<u>Simran Jevrani</u>
16	Kachare Ishwari Pradeep	7858	<u>Ishwari Kachare</u>	<u>Ishwari Kachare</u>
17	Kamat Sanskruti Santosh	7859	<u>Sanskruti Kamat</u>	<u>Sanskruti Kamat</u>
18	Khanvilkar Anjali Hemant	7860	<u>Anjali Khanvilkar</u>	<u>Anjali Khanvilkar</u>
19	Kharade Sanchit Sachin	7861	<u>Sanchit Kharade</u>	<u>Sanchit Kharade</u>
20	Khot Vaishnavi Jitendra	7862	<u>Vaishnavi Khot</u>	<u>Vaishnavi Khot</u>
21	Korane Harshad Mahesh	7863	<u>Harshad Korane</u>	<u>Harshad Korane</u>
22	Kulkarni Sai Vivek	7864	<u>Sai Kulkarni</u>	<u>Sai Kulkarni</u>
23	Lad Anjali Vijay	7865	<u>Anjali Lad</u>	<u>Anjali Lad</u>
24	Ligade Smeet Sunil	7866	<u>Smeet Ligade</u>	<u>Smeet Ligade</u>
25	Majgavkar Sanika Sagar	7867	<u>Sanika Majgavkar</u>	<u>Sanika Majgavkar</u>
26	Mali Prachi Sanjay	7868	<u>Prachi Mali</u>	<u>Prachi Mali</u>
27	Mane Rohan Baban	7869	<u>Rohan Mane</u>	<u>Rohan Mane</u>
28	Mujawar Aabida Altaf	7870	<u>Aabida Mujawar</u>	<u>Aabida Mujawar</u>
29	Murti Vanshita Sanjay	7871	<u>Vanshita Murti</u>	<u>Vanshita Murti</u>
30	Parulekar Diksha Devdatta	7872	<u>Diksha Parulekar</u>	<u>Diksha Parulekar</u>
31	Patil Avantika Arun	7873	<u>Avantika Patil</u>	<u>Avantika Patil</u>
32	Patil Kartigraj Bhagwan	7874	<u>Kartigraj Patil</u>	<u>Kartigraj Patil</u>

33	Patil Sammed Annaso	7875	Patil	Patil
34	Patil Sharwari Yuvraj	7876	Patil	Patil
35	Patil Suhani Sadashiv	7877	Patil	Patil
36	Powar Diya Kiran	7878	Powar	Powar
37	Prabhu Savali Shivaji	7879	Prabhu	Prabhu
38	Shaikh Mushfira Balu	7880	Sh.	Sh.
39	Shaikh Rizwan firoj	7881	Rizwan	Rizwan
40	Shelke Yogesh Balu	7882	Shelke	Shelke
41	Shewale Prithviraj Subhash	7883	Shewale	Shewale
42	Sonule Sushant Krishnat	7884	Sonule	Sonule
43	Sutar Jayshri Krishnat	7885	Sutar	Sutar
44	Wadkar Samrudhi Dhanaji	7886	Wadkar	Wadkar
45	Yadav Sushant Harishchandra	7887	Yadav	Yadav
46	Yatam Ashutosh Bhagvan	7931	Yatam	Yatam
47	Patil Tejas Tukaram			
48	Todkar Nirjara Shivaji			

49. Chavan Sanika Pradeep 7924 ~~Sanika~~ ~~Sanika~~

Subject Wise Student Blank Marks Entry

Session: April-May 2024

Subject: MICROBIOLOGY (DSC-1010D)

Stream: B.Sc.

Standard: B.SC. - SY

Sub-Subject: CIE

Semester: SEM - IV

Max Marks: 30

Print Date : 29-04-2024

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2022037490	527362	3002460	ABRANGE VAISHNAVI VINOD	26
2	2022037573	527363	3006401	BHOSALE VEDIKA SUDHIR	22
3	2022037496	527364	3003285	CHOUGULE SANIKA VISHNU	30
4	2022037498	527365	3002517	DINDAYAL PRABODHINI RAJU	17
5	2022037499	527366	3003043	DINDE ANKITA RANGRAO	27
6	2022037500	527367	3002660	GAIKWAD DIVYA SANJAY	17
7	2022037501	527368	3002494	GAIKWAD NIKITA NANDKUMAR	25
8	2022037504	527369	3002813	GURAV MANSI SUNIL	26
9	2022037505	527370	3004046	HAJARE AISHWARYA GANESH	17
10	2022037549	527371	3006176	HARDIKAR YOGI ASHUTOSH	23
11	2021037199	527372	2952460	HARSHE ARPITA ASHOK	16
12	2022037506	527373	3002950	JADHAV KARAN DIPAK	16
13	2022037597	527374	3006664	JADHAV VINAYAK SANJAY	25
14	2022037508	527375	3004320	JASUD RUTUJA TANAJI	19
15	2022037598	527376	3006691	JEVRANI SIMRAN ANIL	11
16	2022037509	527377	3003964	KACHARE ISHWARI PRADEEP	24
17	2022037510	527378	3002886	KAMAT SANSKRUTI SANTOSH	18
18	2022037513	527379	3003305	KHANVILKAR ANJALI HEMANT	16
19	2022037515	527380	3003296	KHARADE SANCHIT SACHIN	25
20	2022037516	527381	3003636	KHOT VAISHNAVI JITENDRA	21
21	2022037518	527382	3003206	KORANE HARSHAD MAHESH	17
22	2022037519	527383	3002622	KULKARNI SAI VIVEK	19
23		527384	3011310	LAD ANJALI VIJAY	18
24	2022037520	527385	3003136	LIGADE SMEET SUNIL	17
25	2022037525	527386	3006592	MAJGAVKAR SANIKA SAGAR	25
26	2022037576	527387	3006453	MALI PRACHI SANJAY	23
27	2022037521	527388	3002486	MANE ROHAN BABAN	27
28	2022037523	527389	3002484	MUJAWAR AABIDA ALTAF	24
29	2022037526	527390	3003066	MURTI VANSHITA SANJAY	26
30	2022037528	527391	3002716	PARULEKAR DIKSHA DEVDATTA	28
31	2022037529	527392	3003605	PATIL AVANTIKA ARUN	23
32	2022037533	527393	3006659	PATIL KARTIKRAJ BHAGAVAN	23
33		527394	3011312	PATIL SAMMED ANNASO	21
34	2022037532	527395	3003644	PATIL SHARWARI YUVRAJ	17
35	2022037534	527396	3002994	PATIL SUHANI SADASHIV	20
36	2022037537	527397	3003308	POWAR DIYA KIRAN	21
37	2022037538	527398	3003238	PRABHU SAVALI SHIVAJI	18
38	2022037540	527399	3002841	SHAIKH MUSHFIRA BALU	26
39	2022037445	527400	3002792	SHAIKH RIJWAN FIROJ	29
40	2022037541	527401	3003738	SHELKE YOGESH BALU	14
41	2022037542	527402	3002603	SHEWALE PRITHVIRAJ SUBHASH	25
42	2022037568	527403	3006379	SONULE SUSHANT KRISHNAT	27
43		527404	3011325	SUTAR JAYSHRI KRUSHNAT	17
44	2022037546	527405	3003262	WADKAR SAMRUDHI DHANAJI	28
45	2022037547	527406	3003843	YADAV SUSHANT HARISHCHANDRA	21
46	2022037544	527436	3003060	TODKAR NIRJARA SHIVAJI	9
47	2022037548	527449	3002996	YATAM ASHUTOSH BHAGVAN	16
48		527465	3011684	CHAVAN SANIKA PRADEEP	13
49	2021037189	600588	2950478	CHOUGALE TRUPTI TUKARAM	18

Subject Wise Student Blank Marks Entry

Session: April-May 2024

Subject: MICROBIOLOGY-PR (DSC-1010D- PR)

Stream: B.Sc.

Standard: B.SC. - SY

Sub-Subject: CA

Semester: SEM - IV

Max Marks: 100

Print Date : 29-04-2024

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2022037490	527362	3002460	ABRANGE VAISHNAVI VINOD	75
2	2022037573	527363	3006401	BHOSALE VEDIKA SUDHIR	76
3	2022037496	527364	3003285	CHOUGULE SANIKA VISHNU	92
4	2022037498	527365	3002517	DINDAYAL PRABODHINI RAJU	70
5	2022037499	527366	3003043	DINDE ANKITA RANGRAO	80
6	2022037500	527367	3002660	GAIKWAD DIVYA SANJAY	84
7	2022037501	527368	3002494	GAIKWAD NIKITA NANDKUMAR	70
8	2022037504	527369	3002813	GURAV MANSI SUNIL	71
9	2022037505	527370	3004046	HAJARE AISHWARYA GANESH	72
10	2022037549	527371	3006176	HARDIKAR YOGI ASHUTOSH	84
11	2021037199	527372	2952460	HARSHE ARPITA ASHOK	50
12	2022037506	527373	3002950	JADHAV KARAN DIPAK	85
13	2022037597	527374	3006664	JADHAV VINAYAK SANJAY	90
14	2022037508	527375	3004320	JASUD RUTUJA TANAJI	72
15	2022037598	527376	3006691	JEVRANI SIMRAN ANIL	67
16	2022037509	527377	3003964	KACHARE ISHWARI PRADEEP	75
17	2022037510	527378	3002886	KAMAT SANSKRUTI SANTOSH	70
18	2022037513	527379	3003305	KHANVILKAR ANJALI HEMANT	72
19	2022037515	527380	3003296	KHARADE SANCHIT SACHIN	90
20	2022037516	527381	3003636	KHOT VAISHNAVI JITENDRA	75
21	2022037518	527382	3003206	KORANE HARSHAD MAHESH	72
22	2022037519	527383	3002622	KULKARNI SAI VIVEK	75
23		527384	3011310	LAD ANJALI VIJAY	73
24	2022037520	527385	3003136	LIGADE SMEET SUNIL	72
25	2022037525	527386	3006592	MAJGAVKAR SANIKA SAGAR	79
26	2022037576	527387	3006453	MALI PRACHI SANJAY	74
27	2022037521	527388	3002486	MANE ROHAN BABAN	70
28	2022037523	527389	3002484	MUJAWAR AABIDA ALTAF	70
29	2022037526	527390	3003066	MURTI VANSHITA SANJAY	68
30	2022037528	527391	3002716	PARULEKAR DIKSHA DEVDATTA	90
31	2022037529	527392	3003605	PATIL AVANTIKA ARUN	76
32	2022037533	527393	3006659	PATIL KARTIKRAJ BHAGAVAN	85
33		527394	3011312	PATIL SAMMED ANNASO	76
34	2022037532	527395	3003644	PATIL SHARWARI YUVRAJ	66
35	2022037534	527396	3002994	PATIL SUHANI SADASHIV	67
36	2022037537	527397	3003308	POWAR DIYA KIRAN	69
37	2022037538	527398	3003238	PRABHU SAVALI SHIVAJI	66
38	2022037540	527399	3002841	SHAIKH MUSHFIRA BALU	85
39	2022037445	527400	3002792	SHAIKH RIJWAN FIROJ	87
40	2022037541	527401	3003738	SHELKE YOGESH BALU	65
41	2022037542	527402	3002603	SHEWALE PRITHVIRAJ SUBHASH	81
42	2022037568	527403	3006379	SONULE SUSHANT KRISHNAT	86
43		527404	3011325	SUTAR JAYSHRI KRUSHNAT	67
44	2022037546	527405	3003262	WADKAR SAMRUDHI DHANAJI	71
45	2022037547	527406	3003843	YADAV SUSHANT HARISHCHANDRA	68
46	2022037544	527436	3003060	TODKAR NIRJARA SHIVAJI	64
47	2022037548	527449	3002996	YATAM ASHUTOSH BHAGVAN	66
48		527465	3011684	CHAVAN SANIKA PRADEEP	76
49	2021037189	600588	2950478	CHOUGALE TRUPTI TUKARAM	60

“Dissemination of Education for Knowledge, Science and Culture”

- Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Microbiology (UG)

Academic Year 2023-24

B.Sc.III SEM V

Internal Exam

Notice

Date -10/10/2023

All the students of B. Sc. III Microbiology are hereby informed that the Internal Exam of Microbiology is scheduled on 21st and 23rd October, 2023 at 11:30 am in class room no. 64 . Please make it convenient to be present on time.

Date	Time	Subject
21/10/2023	11.30 AM to 12.00 PM	Immunology and Medical Microbiology (Paper IX- Section I)
	12.00 PM to 12.30 PM	Immunology and Medical Microbiology (Paper IX- Section II)
23/10/2023	11.30 PM to 12.00 PM	Industrial Microbiology and Microbial Biochemistry (Paper X - Section I)
	12.00 PM to 12.30 PM	Industrial Microbiology and Microbial Biochemistry (Paper X - SectionII)

Dr.G: K. Sontakke

Incharge Head
Department Of Microbiology
Vivekanand College, Kolhapur.
(Autonomous)

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
 2130, E Ward, Tarabai Park, Kolhapur, Maharashtra 416003

VVM
 (Immunity)

Session: NOVEMBER-DECEMBER 2023

Stream: B.Sc.

Standard: B.SC. - TY

Semester: SEM - V

Print Date : 25-11-2023

Subject: MICROBIOLOGY-I (DSE - 1010E1)

Sub-Subject: CIE

Max Marks: 15

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2021037185	59922	2950719	Angaj Aishwarya Maruti	
2	2021037186	59925	2950477	BALEKUNDRI DHANASHRI RAJU	11
3	2021037187	59934	2952395	BHOSALE SHARAYU PRADEEP	09
4	2021037188	59940	2950940	CHANDALA VAISHNAVI VIVEK	12
5	2021037243	59943	2953290	CHAVAN SANIKA SAGAR	09
6	2021037190	59957	2953699	DABHOLKAR PRAVARTTA ABHIJIT	12
7	2021037194	59976	2950667	Gawari Sapana Shivaram	04
8	2020037196	59985	2950996	Gurav Atharva ramdas	10
9	2021037197	59987	2952399	GURAV SHIVANI VINAYAK	08
10	2021037198	59990	2952462	Hande Pallavi Ravindra	10
11	2021037200	59992	2949806	HAWAL ARPITA SACHIN	10
12	2021037201	59993	3011440	INGAVALE SHRAVANI KIRAN	12
13		59997	2950974	JADHAV MILISHA SURENDRA	07
14		60004	3011388	JATRATE SANIKA MOHAN	08
15	2021037202	60008	2950069	KALAMKAR ASAVARI ANIL	06
16	2021037204	60017	2952384	KAMBLE TEJASWINI MARUTI	10
17	2021037205	60018	2949867	KANDALKAR NAMRATA ANIL	05
18	2021037206	60019	2953215	KANDALKAR SHUKRANI CHANDRAKANT	11
19	2021037207	60024	2950792	KASHID SNEHAL BABASO	11
20	2021037208	60026	2949964	KESARKAR PRACHI CHANDRAKANT	11
21	2021037209	60028	2950117	KHAIRMODE SWARUPA PRASAD	09
22	2021037211	60032	2952418	Khot Harshada Pradip	15
23	2021037213	60041	2951124	KOLI SAKSHI DIPAK	11
24	2021037216	60053	2950542	LOLE SHRIYA PRAKASH	10
25	2021037217	60054	2950468	MADHALE ASHLESHA SHIVALING	10
26	2021037218	60058	2950469	Rahul Gautam Malavi	15
27		60065	3011386	MANE YASH SANJAY	07
28	2021037219	60077	2950641	MULIK MOHINI SHIVAJI	08
29	2021037220	60079	2953580	MULLA SANOVAR SALIM	11
30	2021037221	60088	2952247	PADAVAL DAMINI MOHAN	11
31	2021037222	60090	2950524	PARDESHI SHRUTIKA MANIK	11
32		60093	3006311	PARKAR SIDDHI ANIL	10
33	2021037223	60099	2949981	PATIL ARPITA SHIVAJI	08
34	2021037226	60110	2949843	PATIL POOJA AMAR	11
35		60114	3006381	PATIL SAMRUDDHI SUDHIR	09
36	2021037228	60118	2952261	PATIL SANIKA SANJAY	07
37	2021037229	60119	2953565	PATIL SANIKA SHITAL	13
38	2021037230	60128	2953416	PATIL SMITA LAKSHMAN	12
39	2021037071	60139	2953631	PAWAR GALAXY SUNIL	13
40	2021037231	60145	2953624	PISAL VAISHANVI RAMESH	13
41	2021037232	60146	2953475	POTDAR SHEFALI SATISH	09
42	2021037233	60148	2950015	POWAR RUSHITA DINKAR	09
43	2021037234	60154	2953340	Sahani Ankita Chotelal	12
44	2021037235	60159	2950510	SOURABH RAJARAM SANKPAL	13
45		60166	3011410	SAWANT RAKHI RAVIRAJ	11
46	2021037236	60167	2950655	SAWANT ROHAN RAVINDRA	12
47		60180	3011387	SHINDE SHREYA SHRIKANT	13
48	2021037237	60187	2950654	Surgali Shreeshail Mallappa	07
49	2021037238	60189	2950371	Sutar Kedar Santosh	09
50	2021037240	60200	2951248	Thorbole Sanika Prakash	10
51	2021037242	60202	2950706	VHARAMBLE PRANALI SHIVAJI	10
52		60222	3011470	PATIL SANIKA VISHWAS	10
53		60224	3011382	EKSHINGE PRANALI PANDIT	05
					05

Jadhav Sonali Yithal

absent

SDG

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
 2130, E Ward, Tarabai Park, Kolhapur, Maharashtra 416003

Subject Wise Student Blank Marks Entry

Session: NOVEMBER-DECEMBER 2023

Subject: MICROBIOLOGY-II (DSE - 1010E)

Stream: B.Sc.

Standard: B.SC. - TY

Semester: SEM - V

Sub-Subject: C

Print Date : 25-11-2023

Max Marks: 1

Page No :Page 1 of

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2021037185	59922	2950719	Angaj Aishwarya Maruti	
2	2021037186	59925	2950477	BALEKUNDRI DHANASHRI RAJU	14
3	2021037187	59934	2952395	BHOSALE SHARAYU PRADEEP	12
4	2021037188	59940	2950940	CHANDALA VAISHNAVI VIVEK	14
5	2021037243	59943	2953290	CHAVAN SANIKA SAGAR	09
6	2021037190	59957	2953699	DABHOLKAR PRAVARTTA ABHIJIT	15
7	2021037194	59976	2950667	Gawari Sapana Shivaram	09
8	2020037196	59985	2950996	Gurav Atharva ramdas	10
9	2021037197	59987	2952399	GURAV SHIVANI VINAYAK	15
10	2021037198	59990	2952462	Hande Pallavi Ravindra	15
11	2021037200	59992	2949806	HAWAL ARPITA SACHIN	15
12		59993	3011440	INGVALE SHRAVANI KIRAN	15
13	2021037201	59997	2950974	JADHAV MILISHA SURENDRA	04
14		60004	3011388	JATRATE SANIKA MOHAN	10
15	2021037202	60008	2950069	KALAMKAR ASAVARI ANIL	10
16	2021037204	60017	2952384	KAMBLE TEJASWINI MARUTI	15
17	2021037205	60018	2949867	KANDALKAR NAMRATA ANIL	05
18	2021037206	60019	2953215	KANDALKAR SHUKRANI CHANDRAKANT	12
19	2021037207	60024	2950792	KASHID SNEHAL BABASO	13
20	2021037208	60026	2949964	KESARKAR PRACHI CHANDRAKANT	13
21	2021037209	60028	2950117	KHAIRMODE SWARUPA PRASAD	12
22	2021037211	60032	2952418	Khot Harshada Pradip	14
23	2021037213	60041	2951124	KOLI SAKSHI DIPAK	15
24	2021037216	60053	2950542	LOLE SHRIYA PRAKASH	15
25	2021037217	60054	2950468	MADHALE ASHLESHA SHIVALING	15
26	2021037218	60058	2950469	Rahul Gautam Malavi	10
27		60065	3011386	MANE YASH SANJAY	07
28	2021037219	60077	2950641	MULIK MOHINI SHIVAJI	11
29	2021037220	60079	2953580	MULLA SANOVAR SALIM	13
30	2021037221	60088	2952247	PADAVAL DAMINI MOHAN	11
31	2021037222	60090	2950524	PARDESHI SHRUTIKA MANIK	13
32		60093	3006311	PARKAR SIDDHI ANIL	15
33	2021037223	60099	2949981	PATIL ARPITA SHIVAJI	12
34	2021037226	60110	2949843	PATIL POOJA AMAR	13
35		60114	3006381	PATIL SAMRUDDHI SUDHIR	13
36	2021037228	60118	2952261	PATIL SANIKA SANJAY	13
37	2021037229	60119	2953565	PATIL SANIKA SHITAL	14
38	2021037230	60128	2953416	PATIL SMITA LAKSHMAN	14
39	2021037071	60139	2953631	PAWAR GALAXY SUNIL	11
40	2021037231	60145	2953624	PISAL VAISHANVI RAMESH	12
41	2021037232	60146	2953475	POTDAR SHEFALI SATISH	09
42	2021037233	60148	2950015	POWAR RUSHITA DINKAR	13
43	2021037234	60154	2953340	Sahani Ankita Chotelal	14
44	2021037235	60159	2950510	SOURABH RAJARAM SANKPAL	13
45		60166	3011410	SAWANT RAKHI RAVIRAJ	15
46	2021037236	60167	2950655	SAWANT ROHAN RAVINDRA	13
47		60180	3011387	SHINDE SHREYA SHRIKANT	14
48	2021037237	60187	2950654	Surgali Shreeshail Mallappa	14
49	2021037238	60189	2950371	Sutar Kedar Santosh	12
50	2021037240	60200	2951248	Thorbole Sanika Prakash	14
51	2021037242	60202	2950706	VHARAMBLE PRANALI SHIVAJI	15
52		60222	3011470	PATIL SANIKA VISHWAS	11
53		60224	3011382	EKSHINGE PRANALI PANDIT	10
					07

54

Jadhav Sonali vithal

Absent

S.A.Pise

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
2130, E Ward, Tarabai Park, Kolhapur, Maharashtra 416003

Subject Wise Student Blank Marks Entry

Session: NOVEMBER-DECEMBER 2023

Subject: MICROBIOLOGY-I (DSE - 1010E1)

Stream: B.Sc.

Biocchem.

Standard: B.SC. - TY

Sub-Subject: CIE

Semester: SEM - V

Max Marks: 15

Print Date : 25-11-2023

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2021037185	59922	2950719	Angaj Aishwarya Maruti	11
2	2021037186	59925	2950477	BALEKUNDRI DHANASHRI RAJU	08
3	2021037187	59934	2952395	BHOSALE SHARAYU PRADEEP	14
4	2021037188	59940	2950940	CHANDALA VAISHNAVI VIVEK	06
5	2021037243	59943	2953290	CHAVAN SANIKA SAGAR	05
6	2021037190	59957	2953699	DABHOLKAR PRAVARTHA ABHIJIT	03
7	2021037194	59976	2950667	Gawari Sapana Shivaram	10
8	2020037196	59985	2950996	Gurav Atharva ramdas	13
9	2021037197	59987	2952399	GURAV SHIVANI VINAYAK	09
10	2021037198	59990	2952462	Hande Pallavi Ravindra	13
11	2021037200	59992	2949806	HAWAL ARPITA SACHIN	14
12		59993	3011440	INGVALE SHRAVANI KIRAN	08
13	2021037201	59997	2950974	JADHAV MILISHA SURENDRA	10
14		60004	3011388	JATRATE SANIKA MOHAN	11
15	2021037202	60008	2950069	KALAMKAR ASAVARI ANIL	12
16	2021037203	60017	2952384	KAMBLE TEJASWINI MARUTI	06
17	2021037204	60018	2949867	KANDALKAR NAMRATA ANIL	12
18	2021037205	60019	2953215	KANDALKAR SHUKRANI CHANDRAKANT	13
19	2021037207	60024	2950792	KASHID SNEHAL BABASO	10
20	2021037208	60026	2949964	KESARKAR PRACHI CHANDRAKANT	12
21	2021037209	60028	2950117	KHAIRMODE SWARUPA PRASAD	11
22	2021037211	60032	2952418	Knot Harshada Pradip	09
23	2021037213	60041	2951124	KOLI SAKSHI DIPAK	08
24	2021037214	60053	2950542	LOLE SHRIYA PRAKASH	10
25	2021037215	60054	2950468	MADHALE ASHLESHA SHIVALING	08
26	2021037215	60058	2950469	Rahul Gautam Malavi	08
27		60059	3011386	MANE YASH SANJAY	06
28	2021037217	60077	2950641	MULIK MOHINI SHIVAJI	09
29	2021037220	60079	2953580	MULLA SANOVAR SALIM	12
30	2021037221	60083	2952247	PADAVAL DAMINI MOHAN	13
31	2021037222	60080	2950524	PARDESHI SHRUTIKA MANIK	09
32		60083	3000311	PARKAR SIDDHI ANIL	11
33	2021037223	60089	2949981	PATIL ARPITA SHIVAJI	11
34		60090	2949843	PATIL POOJA AMAR	12
35		60094	3006381	PATIL SAMRUDDHI SUDHIR	11
36	2021037224	60118	2952261	PATIL SANIKA SANJAY ✓	13
37	2021037225	60118	2953565	PATIL SANIKA SHITAL ✓	13
38	2021037226	60126	2953416	PATIL SMITA LAKSHMAN	09
39	2021037227	60130	2953631	PAWAR GALAXY SUNIL	12
40	2021037228	60136	2953624	PISAL VAISHANVI RAMESH	13
41	2021037229	60146	2953475	POTDAR SHEFALI SATISH	08
42	2021037230	60150	2950015	POWAR RUSHITA DINKAR	14
43	2021037231	60154	2953340	Sahani Anika Chotelal	14
44	2021037232	60158	2950510	SOURABHI RAJARAM SANKPAL	11
45	2021037233	60168	3011410	SAWANT RAKHI RAVIRAJ	12
46	2021037234	60167	2950655	SAWANT ROHAN RAVINDRA	12
47	2021037235	60169	3011387	SHARDE SHREYA SHRIKANT	11
48	2021037236	60177	2950654	Sharma Shreeshail Mallappa	14
49	2021037237	60188	2950071	Sutar Pedar Santosh	07
50	2021037238	60199	2951248	Thakur Sanika Prakash	11
51	2021037239	60203	2950706	VIRKAMBLE PRANALI SHIVAJI	13
52	2021037240	60208	3011470	PATIL ANHARA VISHWAS	10
53	2021037241	60214	3011382	ERSONICE PRANALI PANDIT	08

S4.

Jadhav Sonali Vithal

Absent

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
2130, E Ward, Tarabai Park, Kolhapur, Maharashtra 416003

AAT/NRJ
J.M. & Trimbik
Biochemists

Subject Wise Student Blank Marks Entry

Subject: MICROBIOLOGY - IV (DSE - 1010E4)

Session: NOVEMBER-DECEMBER 2023

Stream: B.Sc.

Standard: B.SC. - TY

Semester: SEM - V

Print Date : 25-11-2023

Sub-Subject: CIE

Max Marks: 15

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2021037185	59922	2950719	Angaj Aishwarya Maruti	10
2	2021037186	59925	2950477	BALEKUNDRI DHANASHRI RAJU	07
3	2021037187	59934	2952395	BHOSALE SHARAYU PRADEEP	11
4	2021037188	59940	2950940	CHANDALA VAISHNAVI VIVEK	06
5	2021037243	59943	2953290	CHAVAN SANIKA SAGAR	11
6	2021037190	59957	2953699	DABHOLKAR PRAVARTTA ABHIJIT	06
7	2021037194	59976	2950667	Gawari Sapana Shivaram	06
8	2020037196	59985	2950996	Gurav Atharva ramdas	10
9	2021037197	59987	2952399	GURAV SHIVANI VINAYAK	11
10	2021037198	59990	2952462	Hande Pallavi Ravindra	13
11	2021037200	59992	2949806	HAWAL ARPITA SACHIN	11
12		59993	3011440	INGAVALE SHRAVANI KIRAN	06
13	2021037201	59997	2950974	JADHAV MILISHA SURENDRA	07
14		60004	3011388	JATRATE SANIKA MOHAN	08
15	2021037202	60008	2950069	KALAMKAR ASAVARI ANIL	08
16	2021037204	60017	2952384	KAMBLE TEJASWINI MARUTI	04
17	2021037205	60018	2949867	KANDALKAR NAMRATA ANIL	09
18	2021037206	60019	2953215	KANDALKAR SHUKRANI CHANDRAKANT	10
19	2021037207	60024	2950792	KASHID SNEHAL BABASO	07
20	2021037208	60026	2949964	KESARKAR PRACHI CHANDRAKANT	08
21	2021037209	60028	2950117	KHAIRMODE SWARUPA PRASAD	05
22	2021037211	60032	2952418	Khot Harshada Pradip	07
23	2021037213	60041	2951124	KOLI SAKSHI DIPAK	11
24	2021037216	60053	2950542	LOLE SHRIYA PRAKASH	09
25	2021037217	60054	2950468	MADHALE ASHLESHA SHIVALING	08
26	2021037218	60058	2950469	Rahul Gautam Malavi	08
27		60065	3011386	MANE YASH SANJAY	04
28	2021037219	60077	2950641	MULIK MOHINI SHIVAJI	08
29	2021037220	60079	2953580	MULLA SANOVAR SALIM	08
30	2021037221	60088	2952247	PADAVAL DAMINI MOHAN	10
31	2021037222	60090	2950524	PARDESHI SHRUTIKA MANIK	06
32		60093	3006311	PARKAR SIDDHI ANIL	11
33	2021037223	60099	2949981	PATIL ARPITA SHIVAJI	08
34	2021037226	60110	2949843	PATIL POOJA AMAR	05
35		60114	3006381	PATIL SAMRUDDHI SUDHIR	10
36	2021037228	60118	2952261	PATIL SANIKA SANJAY	11
37	2021037229	60119	2953565	PATIL SANIKA SHITAL	11
38	2021037230	60128	2953416	PATIL SMITA LAKSHMAN	07
39	2021037071	60139	2953631	PAWAR GALAXY SUNIL	07
40	2021037231	60145	2953624	PISAL VAISHANVI RAMESH	05
41	2021037232	60146	2953475	POTDAR SHEFALI SATISH	08
42	2021037233	60148	2950015	POWAR RUSHITA DINKAR	08 11
43	2021037234	60154	2953340	Sahani Ankita Chotelal	11
44	2021037235	60159	2950510	SOURABH RAJARAM SANKPAL	09
45		60166	3011410	SAWANT RAKHI RAVIRAJ	05
46	2021037236	60167	2950655	SAWANT ROHAN RAVINDRA	08
47		60180	3011387	SHINDE SHREYA SHRIKANT	09
48	2021037237	60187	2950654	Surgali Shreeshail Mallappa	08
49	2021037238	60189	2950371	Sutar Kedar Santosh	11
50	2021037240	60200	2951248	Thorbole Sanika Prakash	04
51	2021037242	60202	2950706	VHARAMBLE PRANALI SHIVAJI	09
52		60222	3011470	PATIL SANIKA VISHWAS	03
53		60224	3011382	EKSHINGE PRANALI PANDIT	06

"Dissemination of Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Microbiology (UG)

Academic Year 2023-2024

B.Sc. III SEM VI

Internal Exam

NOTICE

Date: 01/03/2024

All the students of B. Sc. III Microbiology are hereby informed that the Internal Exam of Microbiology is scheduled on 11th and 12th March, 2024 at 11:30 am in class room no. 64. Please be present on time.

Date	Time	Subject
11/03/2024	11.30 AM to 12.30 PM	Virology (Paper XIII)
	12.30 PM to 1.30 PM	Microbial Genetics (Paper XIV)
12/03/2024	11.30 AM to 12.30 PM	Agricultural Microbiology (Paper XV)
	12.30 PM to 1.30 PM	Environmental Microbiology (Paper XVI)



Dr. G. K. Sontakke

HEAD
DEPARTMENT OF MICROBIOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand Collage Kolhapur (Empowered Autonomous)

Department of Microbiology (UG)

B. Sc. III Internal Exam Attendance Sheet 2023-24

Sem VI - Paper XIII Virology and XIV Microbial Genetics

Date: 11/03/24

Time: 11:30 a.m. to 1:30

Sr. No.	Name of Student	Roll No.	Paper XIII Virology	Paper XIV Microbial Genetics
1	Angaj Aishwarya Maruti	8398	Amangaj ..	Amangaj...
2	Balekundri Dhanashri Raju	8399	Balekundri	Balekundri
3	Bhosale Sharayu Pradeep	8400	Bhosale	Bhosale
4	Chandala Vaishnavi Vivek	8401	Chandala	Chandala
5	Chavan Sanika Sagar	8402	Chavan	Chavan
6	Dabholkar Pravarta Abhijit	8403	Pravarta	Pravarta
7	Ekshinge Pranali Pandit	8404	Ekshinge	Ekshinge
8	Gurav Atharva Ramdas	8405	Gurav	Gurav
9	Gurav Shivani Vinayak	8406	S.V.Gurav	S.V.Gurav
10	Hande Pallavi Ravindra	8407	Hande	Hande
11	Hawal Arpita Sachin	8408	Hawal	Hawal
12	Ingavale Shravani Kiran	8409	S.K. Ingavale	S.K. Ingavale
13	Jadhav Milisha Surendra	8410	Milisha	Milisha
14	Jatrate Sanika Mohan	8411	Jatrate	Jatrate
15	Kalamkar Asavari Anil	8412	Akalamkar	Akalamkar
16	Kamble Tejaswini Maruti	8413	Kamble	Kamble
17	Kandalkar Namrata Anil	8414	Namrata	Namrata
18	Kandalkar Shukrani Chandrakant	8415	Kandalkar	Kandalkar
19	Kashid Snehal Babaso	8416	Kashid	Kashid
20	Kesarkar Prachi Chandrakant	8417	Kesarkar	Kesarkar
21	Khairmode Swarupa Prasad	8418	Khairmode	Khairmode
22	Khot Harshada Pradip	8419	Khot	Khot
23	Koli Sakshi Dipak	8420	Koli	Koli
24	Lole Shriya Prakash	8421	Lole	Lole
25	Madhale Ashlesha Shivaling	8422	Madhale	Madhale
26	Malavi Rahul Gautam	8423	Malavi	Malavi
27	Mane Yash Sanjay	8424	Mane	Mane
28	Mulik Mohini Shivaji	8425	Mulik	Mulik
29	Mulla Sanovar Salim	8426	Mulla	Mulla
30	Padaval Damini Mohan	8427	Padaval	Padaval
31	Pardeshi Shrutika Manik	8428	Pardeshi	Pardeshi
32	Parkar Siddhi Anil	8429	Parkar	Parkar
33	Patil Arpita Shivaji	8430	Arpita	Arpita
34	Patil Pooja Amar	8431	Patil	Patil
35	Patil Samruddhi Sudhir	8432	Patil	Patil
36	Patil Sanika Sanjay	8433	Patil	Patil
37	Patil Sanika Shital	8434	Patil	Patil

38	Patil Sanika Vishwas	8435		
39	Patil Smita Lakshman	8436	<u>Patil</u>	<u>Patil</u>
40	Pawar Galaxy Sunil	8437	<u>Galaxy</u>	<u>Galaxy</u>
41	Pisal Vaishanvi Ramesh	8438	<u>Pisal</u>	<u>Pisal</u>
42	Potdar Shefali Satish	8439	<u>Potdar</u>	<u>Potdar</u>
43	Powar Rushita Dinkar	8440	<u>Powar</u>	<u>Powar</u>
44	Sahani Ankita Chotelal	8441	<u>Ankita</u>	<u>Ankita</u>
45	Sankpal Sourabh Rajaram	8442	<u>SPR</u>	<u>SPR</u>
46	Sawant Rakhi Raviraj	8443	<u>Sawant</u>	<u>Sawant</u>
47	Sawant Rohan Ravindra	8444	<u>RS</u>	<u>RS</u>
48	Shinde Shreya Shrikant	8445	<u>Shy OS</u>	<u>Shreya</u>
49	Surgali Shreeshail Mallappa	8446	<u>Shreeshail</u>	<u>Shreeshail</u>
50	Sutar Kedar Santosh	8447	<u>Sutar</u>	<u>Sutar</u>
51	Thorbole Sanika Prakash	8448	<u>Sanika</u>	<u>Sanika</u>
52	Vharamble Pranali Shivaji	8449	<u>Pranali</u>	<u>Pranali</u>
53	Gavari Sapana Shivram	8474	<u>Sapana</u>	<u>Sapana</u>
54	Jadhav Sonali Vithal			

Subject Wise Student Blank Marks Entry

Session: April-May 2024

Subject: MICROBIOLOGY (DSE 1010F1)

Stream: B.Sc.

Standard: B.SC. - TY

Sub-Subject: CIE

Semester: SEM - VI

Max Marks: 15

Print Date : 18-04-2024

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2021037185	600498	2950719	Angaj Aishwarya Maruti	15
2	2021037186	600499	2950477	BALEKUNDRI DHANASHRI RAJU	11
3	2021037187	600500	2952395	BHOSALE SHARAYU PRADEEP	15
4	2021037188	600501	2950940	CHANDALA VAISHNAVI VIVEK	14
5	2021037243	600502	2953290	CHAVAN SANIKA SAGAR	13
6	2021037190	600503	2953699	DABHOLKAR PRAVARTTA ABHIJIT	8
7	2023038404	600504	3011382	EKSHINGE PRANALI PANDIT	14
8	2020037196	600505	2950996	Gurav Atharva ramdas	15
9	2021037197	600506	2952399	GURAV SHIVANI VINAYAK	13
10	2021037198	600507	2952462	Hande Pallavi Ravindra	15
11	2021037200	600508	2949806	HAWAL ARPITA SACHIN	14
12	2023038409	600509	3011440	INGVALE SHRAVANI KIRAN	14
13	2021037201	600510	2950974	JADHAV MILISHA SURENDRA	14
14	2023038411	600511	3011388	JATRATA SANIKA MOHAN	14
15	2021037202	600512	2950069	KALAMKAR ASAVARI ANIL	15
16	2021037204	600513	2952384	KAMBLE TEJASWINI MARUTI	11
17	2021037205	600514	2949867	KANDALKAR NAMRATA ANIL	15
18	2021037206	600515	2953215	KANDALKAR SHUKRANI CHANDRAKANT	15
19	2021037207	600516	2950792	KASHID SNEHAL BABASO	15
20	2021037208	600517	2949964	KESARKAR PRACHI CHANDRAKANT	15
21	2021037209	600518	2950117	KHAIRMODE SWARUPA PRASAD	14
22	2021037211	600519	2952418	Khot Harshada Pradip	14
23	2021037213	600520	2951124	KOLI SAKSHI DIPAK	15
24	2021037216	600521	2950542	LOLE SHRIYA PRAKASH	15
25	2021037217	600522	2950468	MADHALE ASHLESHA SHIVALING	15
26	2021037218	600523	2950469	Malavi Rahul Gautam	13
27	2023038424	600524	3011386	MANE YASH SANJAY	14
28	2021037219	600525	2950641	MULIK MOHINI SHIVAJI	14
29	2021037220	600526	2953580	MULLA SANOVAR SALIM	15
30	2021037221	600527	2952247	PADAVAL DAMINI MOHAN	15
31	2021037222	600528	2950524	PARDESHI SHRUTIKA MANIK	15
32	2022037956	600529	3006311	PARKAR SIDDHI ANIL	15
33	2021037223	600530	2949981	PATIL ARPITA SHIVAJI	15
34	2021037226	600531	2949843	PATIL POOJA AMAR	14
35		600532	3006381	PATIL SAMRUDDHI SUDHIR	14
36	2021037228	600533	2952261	PATIL SANIKA SANJAY	15
37	2021037229	600534	2953565	PATIL SANIKA SHITAL	14
38	2021037230	600536	2953416	PATIL SMITA LAKSHMAN	14
39	2021037071	600537	2953631	PAWAR GALAXY SUNIL	13
40	2021037231	600538	2953624	PISAL VAISHANVI RAMESH	13
41	2021037232	600539	2953475	POTDAR SHEFALI SATISH	15
42	2021037233	600540	2950015	POWAR RUSHITA DINKAR	14
43	2021037234	600541	2953340	Sahani Ankita Chotelal	14
44	2021037235	600542	2950510	SANKPAL SOURABH RAJARAM	15
45	2023038443	600543	3011410	SAWANT RAKHI RAVIRAJ	15
46	2021037236	600544	2950655	SAWANT ROHAN RAVINDRA	15
47		600545	3011387	SHINDE SHREYA SHRIKANT	15
48	2021037237	600546	2950654	Surgali Shreeshail Mallappa	14
49	2021037238	600547	2950371	Sutar Kedar Santosh	15
50	2021037240	600548	2951248	Thorbole Sanika Prakash	15
51	2021037194	600572	2950667	Gawari Sapana Shivaram	14
52	2021037242	600589	2950706	VHARAMBLE PRANALI SHIVAJI	15

Subject Wise Student Blank Marks Entry

Session: April-May 2024

Subject: MICROBIOLOGY (DSE 1010F2)

Stream: B.Sc.

Sub-Subject: CIE

Standard: B.SC. - TY

Max Marks: 15

Semester: SEM - VI

Page No :Page 1 of 1

Print Date : 16-04-2024

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2021037185	600498	2950719	Angaj Aishwarya Maruti	14
2	2021037186	600499	2950477	BALEKUNDRI DHANASHRI RAJU	12
3	2021037187	600500	2952395	BHOSALE SHARAYU PRADEEP	15
4	2021037188	600501	2950940	CHANDALA VAISHNAVI VIVEK	13
5	2021037243	600502	2953290	CHAVAN SANIKA SAGAR	15
6	2021037190	600503	2953699	DABHOLKAR PRAVARTHA ABHIJIT	8
7	2023038404	600504	3011382	EKSHINGE PRANALI PANDIT	12
8	2020037196	600505	2950996	Gurav Atharva ramdas	13
9	2021037197	600506	2952399	GURAV SHIVANI VINAYAK	14
10	2021037198	600507	2952462	Hande Pallavi Ravindra	14
11	2021037200	600508	2949806	HAWAL ARPITA SACHIN	15
12	2023038409	600509	3011440	INGVALE SHRAVANI KIRAN	14
13	2021037201	600510	2950974	JADHAV MILISHA SURENDRA	11
14	2023038411	600511	3011388	JATRATE SANIKA MOHAN	13
15	2021037202	600512	2950069	KALAMKAR ASAVARI ANIL	11
16	2021037204	600513	2952384	KAMBLE TEJASWINI MARUTI	7
17	2021037205	600514	2949867	KANDALKAR NAMRATA ANIL	13
18	2021037206	600515	2953215	KANDALKAR SHUKRANI CHANDRAKANT	13
19	2021037207	600516	2950792	KASHID SNEHAL BABASO	12
20	2021037208	600517	2949964	KESARKAR PRACHI CHANDRAKANT	15
21	2021037209	600518	2950117	KHAIRMODE SWARUPA PRASAD	11
22	2021037211	600519	2952418	Khot Harshada Pradip	12
23	2021037213	600520	2951124	KOLI SAKSHI DIPAK	14
24	2021037216	600521	2950542	LOLE SHRIYA PRAKASH	12
25	2021037217	600522	2950468	MADHALE ASHLESHA SHIVALING	9
26	2021037218	600523	2950469	Malavi Rahul Gautam	12
27	2023038424	600524	3011386	MANE YASH SANJAY	14
28	2021037219	600525	2950641	MULIK MOHINI SHIVAJI	12
29	2021037220	600526	2953580	MULLA SANOVAR SALIM	14
30	2021037221	600527	2952247	PADAVAL DAMINI MOHAN	13
31	2021037222	600528	2950524	PARDESHI SHRUTIKA MANIK	14
32	2022037956	600529	3006311	PARKAR SIDDHI ANIL	12
33	2021037223	600530	2949981	PATIL ARPITA SHIVAJI	14
34	2021037226	600531	2949843	PATIL POOJA AMAR	13
35		600532	3006381	PATIL SAMRUDDHI SUDHIR	10
36	2021037228	600533	2952261	PATIL SANIKA SANJAY	14
37	2021037229	600534	2953565	PATIL SANIKA SHITAL	13
38	2021037230	600536	2953416	PATIL SMITA LAKSHMAN	15
39	2021037071	600537	2953631	PAWAR GALAXY SUNIL	14
40	2021037231	600538	2953624	PISAL VAISHANVI RAMESH	13
41	2021037232	600539	2953475	POTDAR SHEFALI SATISH	11
42	2021037233	600540	2950015	POWAR RUSHITA DINKAR	12
43	2021037234	600541	2953340	Sahani Ankita Chotelal	15
44	2021037235	600542	2950510	SANKPAL SOURABH RAJARAM	12
45	2023038443	600543	3011410	SAWANT RAKHI RAVIRAJ	10
46	2021037236	600544	2950655	SAWANT ROHAN RAVINDRA	13
47		600545	3011387	SHINDE SHREYA SHRIKANT	13
48	2021037237	600546	2950654	Surgali Shreeshail Mallappa	14
49	2021037238	600547	2950371	Sutar Kedar Santosh	14
50	2021037240	600548	2951248	Thorbole Sanika Prakash	13
51	2021037194	600572	2950667	Gawari Sapana Shivaram	10
52	2021037242	600589	2950706	VHARAMBLE PRANALI SHIVAJI	12

Subject Wise Student Blank Marks Entry

Session: April-May 2024

Subject: MICROBIOLOGY (DSE 1010F3)

Stream: B.Sc.

Standard: B.SC. - TY

Sub-Subject: CIE

Semester: SEM - VI

Max Marks: 15

Print Date : 16-04-2024

Page No :Page 1 of 1

SrNo	PRN	SeatNo	GRNos	StudentName	Marks
1	2021037185	600498	2950719	Angaj Aishwarya Maruti	13
2	2021037186	600499	2950477	BALEKUNDRI DHANASHRI RAJU	12
3	2021037187	600500	2952395	BHOSALE SHARAYU PRADEEP	13
4	2021037188	600501	2950940	CHANDALA VAISHNAVI VIVEK	11
5	2021037243	600502	2953290	CHAVAN SANIKA SAGAR	11
6	2021037190	600503	2953699	DABHOLKAR PRAVARTTA ABHIJIT	6
7	2023038404	600504	3011382	EKSHINGE PRANALI PANDIT	11
8	2020037196	600505	2950996	Gurav Atharva ramdas	13
9	2021037197	600506	2952399	GURAV SHIVANI VINAYAK	13
10	2021037198	600507	2952462	Hande Pallavi Ravindra	14
11	2021037200	600508	2949806	HAWAL ARPITA SACHIN	14
12	2023038409	600509	3011440	INGAVALE SHRAVANI KIRAN	11
13	2021037201	600510	2950974	JADHAV MILISHA SURENDRA	11
14	2023038411	600511	3011388	JATRATE SANIKA MOHAN	12
15	2021037202	600512	2950069	KALAMKAR ASAVARI ANIL	14
16	2021037204	600513	2952384	KAMBLE TEJASWINI MARUTI	11
17	2021037205	600514	2949867	KANDALKAR NAMRATA ANIL	12
18	2021037206	600515	2953215	KANDALKAR SHUKRANI CHANDRAKANT	13
19	2021037207	600516	2950792	KASHID SNEHAL BABASO	13
20	2021037208	600517	2949964	KESARKAR PRACHI CHANDRAKANT	11
21	2021037209	600518	2950117	KHAIRMODE SWARUPA PRASAD	10
22	2021037211	600519	2952418	Khot Harshada Pradip	12
23	2021037213	600520	2951124	KOLI SAKSHI DIPAK	14
24	2021037216	600521	2950542	LOLE SHRIYA PRAKASH	14
25	2021037217	600522	2950468	MADHALE ASHLESHA SHIVALING	12
26	2021037218	600523	2950469	Malavi Rahul Gautam	12
27	2023038424	600524	3011386	MANE YASH SANJAY	9
28	2021037219	600525	2950641	MULIK MOHINI SHIVAJI	10
29	2021037220	600526	2953580	MULLA SANOVAR SALIM	12
30	2021037221	600527	2952247	PADAVAL DAMINI MOHAN	11
31	2021037222	600528	2950524	PARDESHI SHRUTIKA MANIK	12
32	2022037956	600529	3006311	PARKAR SIDDHI ANIL	13
33	2021037223	600530	2949981	PATIL ARPITA SHIVAJI	12
34	2021037226	600531	2949843	PATIL POOJA AMAR	11
35		600532	3006381	PATIL SAMRUDDHI SUDHIR	12
36	2021037228	600533	2952261	PATIL SANIKA SANJAY	11
37	2021037229	600534	2953565	PATIL SANIKA SHITAL	10
38	2021037230	600536	2953416	PATIL SMITA LAKSHMAN	7
39	2021037071	600537	2953631	PAWAR GALAXY SUNIL	10
40	2021037231	600538	2953624	PISAL VAISHANVI RAMESH	13
41	2021037232	600539	2953475	POTDAR SHEFALI SATISH	11
42	2021037233	600540	2950015	POWAR RUSHITA DINKAR	11
43	2021037234	600541	2953340	Sahani Ankita Chotelal	11
44	2021037235	600542	2950510	SANKPAL SOURABH RAJARAM	12
45	2023038443	600543	3011410	SAWANT RAKHI RAVIRAJ	10
46	2021037236	600544	2950655	SAWANT ROHAN RAVINDRA	13
47		600545	3011387	SHINDE SHREYA SHRIKANT	10
48	2021037237	600546	2950654	Surgali Shreeshail Mallappa	14
49	2021037238	600547	2950371	Sutar Kedar Santosh	10
50	2021037240	600548	2951248	Thorbole Sanika Prakash	11
51	2021037194	600572	2950667	Gawari Sapana Shivaram	11
52	2021037242	600589	2950706	VHARAMBLE PRANALI SHIVAJI	9

Subject Wise Student Blank Marks Entry

Subject: MICROBIOLOGY (DSE 1010F4)

Session: April-May 2024

Stream: B.Sc.

Standard: B.Sc. - TY

Semester: SEM - VI

Print Date : 16-04-2024

Page No : Page 1 of 1

Max Marks: 15

Sub-Subject: CIE

SrNo	PRN	SeatNo	GRNOS	StudentName	Marks
1	2021037185	600498	2950719	Angaj Aishwarya Maruti	11
2	2021037186	600499	2950477	BALEKUNDRU DHANASHRI RAJU	12
3	2021037187	600500	2952395	BHOSALE SHARAYU PRADEEP	14
4	2021037188	600501	2950940	CHANDALA VAISHNAVI VIVEK	10
5	2021037243	600502	2953290	CHAVAN SANIKA SAGAR	14
6	2021037190	600503	2953699	DABHOLKAR PRAVARTHA ABHIJIT	13
7	2023038404	600504	3011382	EKSHINGE PRANALI PANDIT	15
8	2020037196	600505	2950996	Gurav Atharva ramdas	15
9	2021037197	600506	2952399	GURAV SHIVANI VINAYAK	13
10	2021037198	600507	2952462	Hande Pallavi Ravindra	15
11	2021037200	600508	2949806	HAWAL ARPITA SACHIN	14
12	2023038409	600509	3011440	INGAVALE SHRAVANI KIRAN	14
13	2021037201	600510	2950974	JADHAV MILISHA SURENDRA	10
14	2023038411	600511	3011388	JATRATE SANIKA MOHAN	12
15	2021037202	600512	2950069	KALAMKAR ASAVARI ANIL	13
16	2021037204	600513	2952384	KAMBLE TEJASWINI MARUTI	9
17	2021037205	600514	2949867	KANDALKAR NAMRATA ANIL	13
18	2021037206	600515	2953215	KANDALKAR SHUKRANI CHANDRAKANT	12
19	2021037207	600516	2950792	KASHID SNEHAL BABASO	13
20	2021037208	600517	2949964	KESARKAR PRAACHI CHANDRAKANT	13
21	2021037209	600518	2950117	KHAIRMODE SWARUPA PRASAD	13
22	2021037211	600519	2952418	Khot Harshada Pradip	15
23	2021037213	600520	2951124	KOLI SAKSHI DIPAK	15
24	2021037216	600521	2950542	LOLE SHRIYA PRAKASH	15
25	2021037217	600522	2950468	MADHALE ASHLESHA SHIVALING	15
26	2021037218	600523	2950469	Malavi Rahul Gautam	15
27	2023038424	600524	3011386	MANE YASH SANJAY	15
28	2021037219	600525	2950641	MULIK MOHINI SHIVAJI	12
29	2021037220	600526	2953580	MULLA SANOVAR SALIM	13
30	2021037221	600527	2952247	PADAVAL DAMINI MOHAN	13
31	2021037222	600528	2950524	PARDESHI SHRUTIKA MANIK	14
32	2022037956	600529	3006311	PARKAR SIDDHI ANIL	14
33	2021037223	600530	2949981	PATIL ARPITA SHIVAJI	15
34	2021037226	600531	2949843	PATIL POOJA AMAR	13
35		600532	3006381	PATIL SAMRUDDHI SUDHIR	12
36	2021037228	600533	2952261	PATIL SANIKA SANJAY	14
37	2021037229	600534	2953565	PATIL SANIKA SHITAL	14
38	2021037230	600536	2953416	PATIL SMITA LAKSHMAN	15
39	2021037071	600537	2953631	PAWAR GALAXY SUNIL	15
40	2021037231	600538	2953624	PISAL VAISHNAVI RAMESH	15
41	2021037232	600539	2953475	POTDAR SHEFALI SATISH	15
42	2021037233	600540	2950015	POWAR RUSHITA DINNAR	13
43	2021037234	600541	2953340	Sahani Ankita Chhotelal	15
44	2021037235	600542	2950510	SANKPAL SOURABH RAJARAM	14
45	2023038443	600543	3011410	SAWANT RAKHI RAVIRAJ	14
46	2021037236	600544	2950655	SAWANT ROHAN RAVINDRA	14
47		600545	3011387	SHINDE SHREYA SHRIKANT	13
48	2021037237	600546	2950654	Surgali Shreeshail Mallappa	13
49	2021037238	600547	2950371	Sutar Kedar Santosh	10
50	2021037240	600548	2951248	Thorbole Sanika Prakash	13
51	2021037194	600572	2950667	Gawari Sapana Shivaram	14
52	2021037242	600589	2950706	VHARAMBLE PRANALI SHIVAJI	13

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

B.Sc. Part- III (Microbiology) (Sem- VI) Examination: April-May 2024

Paper XIII – Virology

Internal Examination

Marks: 15

Date: 11/03/2024

Q.1. Choose the correct alternative and answer the following questions:

Marks: 15

1. The unusual base 5-HMC is observed in
a) TMV b) T4 bacteriophage c) HIV d) Adeno virus
2. The total number of capsomers in the capsid of TMV is.....
a) 1230 b) 3120 c) 2130 d) 2110
3. The smallest known infectious agent that contains only single stranded RNA is known as
a) Viroids b) Phages c) Viruses d) Prions
4. The transmissible spongiform encephalopathy is caused by
a) viroids b) prions c) viruses d) phases
5. In phase of one step growth experiment plaque count increases.
a) latent b) T4 c) plateau d) burst
6. Virus shows helical capsid.
a) adeno b) T4 c) HIV d) TMV
7. The icosahedral capsid shows symmetry.
a) 2,3,5 b) 2,5,3 c) 3,2,5 d) 5,3,2
8. The one step growth experiment was first performed by
a) Apler & Griffith b) Iwanosky
c) Ellis & Delbruck d) Diener & Raymer
9. The membranous layer that surround the viral capsid is known as
a) capsomer b) nucleocapsid c) envelope d) spikes
10. of the following is not a property of viruses.
a) infectious b) cellular
c) acellular d) no independent metabolism
11. The genome of TMV is
a) SS DNA b) DS DNA c) SS RNA d) DS RNA
12. The basic unit of capsid is
a) protomer b) capsomer c) amino acid d) none of the above
13. In phase of one step growth expression occurs.
a) eclipse b) intracellular accumulation c) burst d) rise
14. number of corners are found in icosahedral capsid.
a) 22 b) 30 c) 12 d) 20
15. The infectious agent containing only protein is
a) viroids b) prions c) phage d) all of the above

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

B.Sc. Part- III (Microbiology) (Sem- VI) Examination: April-May 2024

Paper XIV- Microbial Genetics

Internal Examination

Marks: 15

Date: 11/03/2024

Q.1. Choose the correct alternative and answer the following questions:

Marks: 15

1. Under environmental conditions mutant gives wild type phenotype.
a) non permissive b) restrictive Pc) permissive d) both a & b
2. The second mutation in different gene that reverses the effect of primary mutation is called as
a) intergenic suppression b) intragenic suppression
c) phenotypic suppression d) polarity suppression
3. mutation changes mutant genotype to wild type genotype.
a) suppressor b) reverse c) intragenic d) phenotypic
4. A second mutation in tRNA gene that reverses the harmful effect of nonsense mutation is called as suppression.
a) frameshift b) missense c) nonsense d) polarity
5. Reversal of the effects of a primary mutation through the action of environment is called suppression.
a) phenotypic b) polarity c) intragenic d) intergenic
6. Selection of auxotrophic mutants by penicillin method is an example of
a) selection based on relative growth b) selection based on relative survival
c) selection based on visual detection d) selection based on colour change
7. Selection of His⁺ mutants is an example of
a) selection based on relative growth b) selection based on relative survival
c) selection based on visual detection d) selection based colour change
8. tRNA containing 4 base anticodons rather than normal 3 base anticodon suppresses the
a) nonsense mutation b) missense mutation c) frameshift mutation d) polarity mutation
9. A second mutation in the same gene that reverses the harmful effect of primary mutation is called suppressor mutation.
a) Intragenic b) Intergenic c) phenotypic d) polarity
10. The mutation that changes wild type genotype to mutant genotype is called mutation.
a) forward b) reverse c) intergenic d) intragenic
11. Reversal of the effect of a primary mutation through the action of an environment is called as suppression.
a) phenotypic b) genotypic c) polarity d) nongenic
12. For isolation of auxotrophic mutant method is used.
a) penicillin selection b) relative survival c) limited dilution d) visual detection
13. A mutant tRNA which can read UAA codon can cause mutation.
a) nonsense b) missense c) frameshift d) polarity

14. In Case mutationally altered protein is always produced.

- a) conditional loss of the function
- b) conditional production of non-functional protein
- c) In both a & b
- d) None of the above

15. The mutations which expresses only under certain environmental condition is called

- a) forward
- b) reverse
- c) conditional
- d) suppressor

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

B.Sc. Part- III (Microbiology) (Sem- VI) Examination: April-May 2024

Paper XV – Agricultural Microbiology

Internal Examination

Marks: 15

Date: 12/03/2024

Q.1. Choose the correct alternative and answer the following questions:

Marks: 15

1. Soil atmosphere is mainly made up of gases.
a) CO₂, O₂, NH₃ b) CO₂, (O), N₂ c) CO₂, N₂, O₂ d) CO, N₂, O₂
2. A symbiosis where two species population have absolutely no impact on survival of each other is called as
a) mutualism b) proto cooperation c) amensalism d) neutralism
3. Actinomycetes in soil can be found in horizon of soil profile.
a) A b) B c) C d) D
4. Acidic soil shows presence of as dominant exchangeable cations.
a) H₂ & Al b) Ca²⁺ & Mg²⁺ c) Ca⁺ & H₂ d) Mg⁺ & H₂
5. cycle can be responsible for greenhouse effect.
a) sulfur b) carbon c) nitrogen d) phosphorous
6. Organism plays a role in sulfur cycle.
a) *Nitrosomonas* b) *Thiobacillus* c) *Cyanobacteria* d) *Bacillus*
7. In dissimilatory nitrate reduction gets reduced to N₂.
a) Nitrate b) Nitrite c) Nitrous oxide d) Ammonia
8. Dominant group of micro-organisms in soil is
a) fungi b) actinomycetes c) virus d) bacteria
9. is an example of endoparasite.
a) ticks b) lice c) fleas d) protozoa
10. Soil that contains equal amount of sand, silt & clay is called as soil.
a) sandy b) loam c) silty d) clay
11. are primitive unicellular eukaryote present in upper layer of soil.
a) protozoa b) fungi c) algae d) viruses
12. Textural triangle programme describes of soil.
a) colour b) structure c) texture d) profile
13. is an important cycle.
a) C b) N₂ c) S d) P
14. are organisms in soil that are responsible for earthy odour of soil after first rain.
a) bacteria b) actinomycetes c) fungi d) prions
15. A mixture of dark, colloidal, organic compounds relatively resistant to decomposition is called as
a) humus b) soil aggregates c) peds d) clumps

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

B.Sc. Part- III(Microbiology) (Sem- VI)Examination:April-May 2024

Paper XVI – Environmental Microbiology

Internal Examination

Marks: 15

Date: 12/03/2024

Q.1. Choose the correct alternative and answer the following questions:

Marks: 15

1. Sewage treatment in an oxidation pond is accomplished by
 - a) algal-bacterial symbiosis
 - b) carbon monoxide
 - c) nuclear radiation
 - d) carbon dioxide
2. is not physical characteristic of sewage.
 - a) temperature
 - b) colour
 - c) pH
 - d) odour
3. Type of filter is commonly used in biosafety cabinets to capture and remove airborne particles.
 - a) carbon filter
 - b) glass fibre filter
 - c) electrostatic filter
 - d) HEPA filter
4. Septic tank works on the principle of
 - a) Aerobic digestion
 - b) continuous flow
 - c) anaerobic digestion
 - d) aeration system
5. of the following BSL is characterised by the highest level of containment and is used for work with dangerous pathogen that have no treatment or vaccine.
 - a) BSL 1
 - b) BSL 2
 - c) BSL 3
 - d) BSL 4
6. Activated sludge process is concerned with waste management is called as
 - a) chemical treatment
 - b) biological treatment
 - c) mechanical treatment
 - d) nuclear treatment
7. is the most common bacteria used for bioleaching.
 - a) spirillum
 - b) coccus
 - c) bacillus
 - d) streptococcus
8. Turbidity of raw water is a measure of
 - a) suspended solids
 - b) acidity of water
 - c) B.O.D
 - d) C.O.D
9. The colour of sewage indicates the of sewage.
 - a) freshness
 - b) smell
 - c) taste
 - d) consistency
10. is the primary purpose of a biological safety cabinet.
 - a) to provide protection
 - b) to maintain sterile environment
 - c) to regulate temperature
 - d) to regulate humidity
11. is added to water. It reacts with organic and inorganic matter and forms common compounds.
 - a) chlorine
 - b) ozone
 - c) carbon
 - d) oxygen
12. has defined various BSL levels.
 - a) CDC
 - b) CRC
 - c) CCC
 - d) CBC
13. in trickling filter contains many species like bacteria and round worms.
 - a) treated water
 - b) biofilm
 - c) waste water
 - d) air influent

14. is the process which belongs to in situ bioremediation.

- a) engineered b) composting c) slurry phase d) aerated lagoon

15. stands for BSL.

- a) biotechnological safety level b) biological safety laboratory
c) biologically safe level d) biological safety levels