

**SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR**

**UG Department of Biotechnology
Skill Based Course: Immunology and Immunodiagnostics
Session 2023-24
Course Coordinator Report**

A Skill Based Course for UG students in the Department Biotechnology, Shri Shivaji Education Society Amravati's Science College, Congress Nagar, Nagpur was held from 18th March 2024 to 12th July 2024. The course title was "Immunology and Immunodiagnostics". It is the complete beginner to Expert Course was perfect for anyone who wants to learn Immunology.


The skill base certificate course syllabus for B.Sc. I, II and III appear students. Fifteen weeks' certificate course in IMMUNOLOGY AND IMMUNODIAGNOSTICS. A total of 75 students were enrolled to the course. The examination of course shall comprise of one theory paper of three hours carries 50 marks and practical of one-hour duration carries 40 marks. Internal assessment for the course based on one theory paper of 10 marks shall be conducted by university approved teachers. Internal assessment marks should be included in minimum passing marks of the students. Candidates are expected to pass separately in theory, internal assessment and practical examination.

Students require 40 % marks in theory for passing including internal marks. Separate passing in practical examination is required, assignment submission is necessary to get internal marks.

Action Taken- In an Immunology and Immunodiagnostics course, students explore the intricate structure and function of the immune system, gaining a deep understanding of immune responses and the mechanisms underlying immune-related diseases. The curriculum emphasizes hands-on skills in applying diagnostic techniques to identify and analyze various conditions in clinical settings. Students learn to develop and utilize advanced immunological assays and tests for accurate disease detection and monitoring.

The course also covers cutting-edge advancements in immunotherapy and vaccine development, preparing students to tackle contemporary challenges in healthcare and research. By integrating theoretical knowledge with practical experience, students are equipped to take on leadership roles in the fields of immunology, diagnostics, and therapeutic innovation.




Dr. Sapna Baghel
Course- Coordinator
Skill Based Course



Immunology & Immunodiagnostics Kit based Hands on Training (2023-2024)



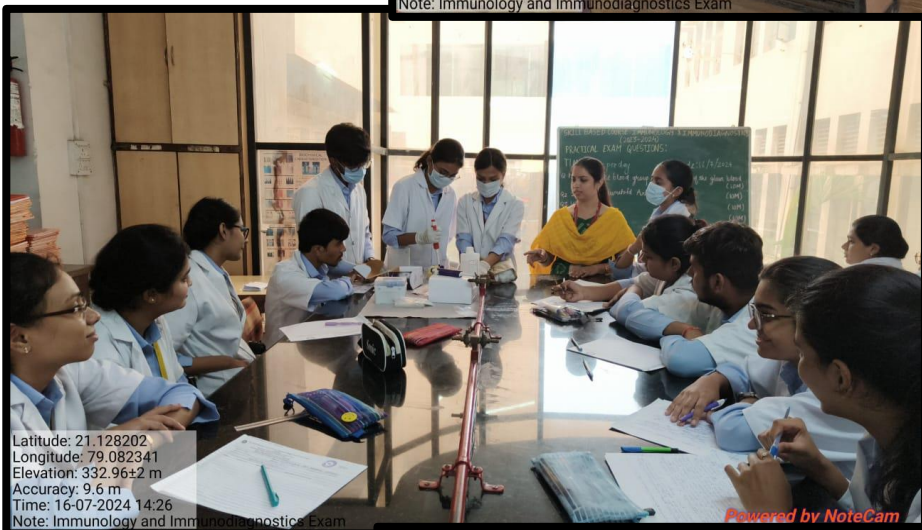
Latitude: 21.128637
Longitude: 79.081487
Elevation: 335.46±4 m
Accuracy: 22.3 m
Time: 16-07-2024 11:20
Note: Immunology and Immunodiagnosics Exam

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Latitude: 21.128025
Longitude: 79.081691
Elevation: 363.46±42 m
Accuracy: 62.7 m
Time: 16-07-2024 11:37
Note: Immunology and Immunodiagnosics Exam

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Latitude: 21.128202
Longitude: 79.082341
Elevation: 332.96±2 m
Accuracy: 9.6 m
Time: 16-07-2024 14:26
Note: Immunology and Immunodiagnosics Exam

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Latitude: 21.128354
Longitude: 79.08217
Elevation: 332.96±3 m
Accuracy: 392.6 m
Time: 16-07-2024 13:42
Note: Immunology and Immunodiagnosics Exam

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Immunology and Immunodiagnosics Exam on 16/07/2024

**SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR**

UG Department of Biotechnology

**Skill Based Course: Immunology and Immunodiagnostics
Session 2023-24**



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1st of August 1923 & presently a State Universities governed by Maharashtra Universities Act No. VI of 2017)

DEPARTMENT OF LIFELONG LEARNING AND EXTENSION
Guru Nanak Bhavan, University Campus, Ambazari Bypass Road, Nagpur - 440033 Phone: 2530860

Dr. Nishikant Raut, (Director)

Mob. No. 9422803768

To,
The Principal
SSES Amravati's Science
College, Congress Nagar,
Nagpur.

No. DOLLE/464/23
Dated : 26. 10. 2023

Subject : Sanction for Conducting Short Term Courses under Jeevan Shikshan Abhiyan on No Grant Basis. (2023-24)

Sir/Madam,

With reference to your proposal for conducting Short Term courses indicated below under Jeevan Shikshan Abhiyan of this Department, this is to inform you that your proposal has been accepted and your College has been granted permission to conduct the course on the following conditions:

Details of the Course

Sr. No.	Name of the Course	Name of Course Coordinator	Duration	Credit	No. of Candidates to be admitted	Fees to be Charged per Student	Fees to be Deposited With the Deptt.
1.	Certificate Course in Biofertilizer and Biopesticide Production.	Dr. Pranita.B. Gulhane.	45 hrs. T-37 hrs. P-08 hrs.	2	80	500/-	10%
2.	Certificate Course in Ground Water Exploration.	Dr. P .B . Zamarkar.	45 hrs. T-36 hrs. P-09 hrs.	2	100	500/-	10%
3.	Certificate Course in Mushroom Cultivation.	Dr. Rupali . H. Mahakhode.	40 hrs. T-20 hrs. P-20 hrs.	2	80	500/-	10%
4.	Certificate Course in Fruit Processing and Wine Technology.	Dr. Pranita B. Gulhane.	45 hrs. T-37 hrs. P-8 hrs.	2	80	500/-	10%
5.	Certificate Course in Environment and water Management.	Dr. Priyadashani N . Deshmukh.	45 hrs. T-30 hrs. P-15 hrs.	2	150	500/-	10%
6.	Certificate Course in Immunology and Immunodiagnostics .	Dr. Sapna. Baghel .	44 hrs. T-36 hrs. P-08 hrs.	2	80	500/-	10%

Rules & Regulations of this Department regarding these courses should be strictly followed.

- This sanction is valid for this particular Batch only.**
- Fees for the course should be charged as per the norms prescribed.
- Expenditure on the course should be incurred as per norms.
- Course should be started within a Month from **the date of sanction.**
- Please communicate your acceptance within **a month and submit the Initial Report**
- Submit the List of Students admitted in the excel format attached herewith.**
- Geotagged Photographs clicked during theory and practical classes have to be submitted along with the final report. **Other than geotagged photographs will not be accepted.**
- Complete details and evidences (along with geotagged photographs) for theory & practical exam / assessment will have to be submitted. Guidelines for allotment of grades should be strictly followed.
- After Completion of the course the dates for assessment /exam should be informed to the Department **at least 10 days in advance.**

Your's faithfully,

26.10.23
for Director

**SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR**

UG Department of Biotechnology

NOTICE

Date: 04/03/2024

All the **Students of B.Sc.-Part I, II and III of BIOTECHNOLOGY** are hereby informed that Department of Biotechnology is conducting **15 weeks Certificate course in IMMUNOLOGY & IMMUNO-DIAGNOSTICS** under **RTMNU Skill Based Program**. The fee for Certificate course will be **Rs 500/- (Five Hundred Rupees Only)**. For further enquiry and form collection contact **Dr. Sapna Baghel** in Department of Biotechnology. Interested students can take admission on before **11/03/2024**. Your registration will be confirmed upon receipt of payment, on a first-come-first serve basis. The registration will end when all 80 seats are filled.



Dr. Sapna Baghel
Course- Coordinator
Skill Based Course



**U.G. DEPARTMENT OF BIOTECHNOLOGY,
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR**

Accredited with CGPA of 3.51 at 'A+' Grade by NAAC, Bangalore

A College with Potential for Excellence

An Institutional Member of APQN

Recognized Center for Higher Learning & Research

A Mentor College under Paramarsh Scheme of UGC, New Delhi

A Mentor College under Paris Sparsh Scheme of Maharashtra State

Skill Based Course for the Session 2023-24

on

Immunology and Immunodiagnostics

Skill Based Certificate Course: Immunology and Immunodiagnostics

Course Co-ordinator: Dr. Sapna Baghel

Course Introduction

This course covers the fundamentals of immunology, including the structure and function of the immune system. It explores various immunological diseases and the latest diagnostic techniques for identifying them. Key topics include antigen-antibody interactions, diagnostic tools such as ELISA, serological tests, rapid plasma regain tests, and tests for rheumatoid arthritis. The course integrates theoretical knowledge with practical applications, focusing on interpreting immunological data in clinical contexts. Participants will gain a solid foundation in immunology and develop skills for effective use of diagnostic tools. Additionally, the course addresses emerging trends and advancements in immunodiagnostics, preparing students for current and future challenges in the field. Hands-on laboratory sessions will enhance practical skills and deepen understanding of complex concepts.

Course Objectives

- The primary objective of this course is to help students develop the skills necessary for the critical analysis of topics related to health and disease.
- To provide an up to date knowledge of basic and technical immunology.
- An understanding of the characteristics of antigens and antibodies.
- An understanding of the nature of antigen-antibody reactions.
- To understand how the immune system develops, how the body defends itself against disease and what happens when it all goes wrong.
- To provide simple and accurate methods of making a laboratory diagnosis of infectious diseases and immunodeficiency.

Registration Date: 11/03/2024

Prof. Atul Bobdey
Coordinator
Dept. of Biotechnology

Prof. Mahendra Dhore
Principal
Science College, Nagpur

Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology

Skill Based Course: Immunology and Immunodiagnostics

Session 2023-24

Course Co-ordinator: Dr. Sapna Baghel

Course Introduction

This course covers the fundamentals of immunology, including the structure and function of the immune system. It explores various immunological diseases and the latest diagnostic techniques for identifying them. Key topics include antigen-antibody interactions, diagnostic tools such as ELISA, serological tests, rapid plasma regain tests, and tests for rheumatoid arthritis. The course integrates theoretical knowledge with practical applications, focusing on interpreting immunological data in clinical contexts. Participants will gain a solid foundation in immunology and develop skills for effective use of diagnostic tools. Additionally, the course addresses emerging trends and advancements in immunodiagnostics, preparing students for current and future challenges in the field. Hands-on laboratory sessions will enhance practical skills and deepen understanding of complex concepts.

Course Objectives

- 1) The primary objective of this course is to help students develop the skills necessary for the critical analysis of topics related to health and disease.
- 2) To provide an up to date knowledge of basic and technical immunology.
- 3) An understanding of the characteristics of antigens and antibodies.
- 4) An understanding of the nature of antigen-antibody reactions.
- 5) To understand how the immune system develops, how the body defends itself against disease and what happens when it all goes wrong.
- 6) To provide simple and accurate methods of making a laboratory diagnosis of infectious diseases and immunodeficiency.

Instructional Strategies: Theory class, Practical, Video clips, Models etc.

- **Evaluation Strategies:** Oral discussions, Final MCQ and Practical examination

Course Outcomes: By the end of this course, participants will be able to:

1. **Understand Immune System Basics:** Grasp the structure and function of the immune system.
2. **Diagnose Diseases:** Use diagnostic tools to identify and analyze immune-related disorders.
3. **Interpret Data:** Analyze and interpret immunological data in clinical and research settings.
4. **Apply Techniques:** Effectively utilize both traditional and advanced immunodiagnostic methods.
5. **Gain Practical Experience:** Enhance hands-on skills through laboratory sessions and stay updated on emerging

Duration of course: Fifteen weeks



Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology

Skill Based Course: Immunology and Immunodiagnostics

Session 2023-24

Module: The Structure of Syllabus and system of evaluation

The structure of syllabus for certificate course along with distribution of marks is displayed in the following table.

Course	Theory papers and Practicals	Marks			Total marks
		Theory	Internal assessment	Practical	
Certificate course in Immunology and Immunodiagnostics	1. Theory paper – Immunology and Immunodiagnostics	50	10		100
	2. Practical based on course			40	
		Grand total			100

*Internal assessment –Based on student's attendance and performance during unit test exam and assignment.

Based on assignment plus activity conducted on kit based practical, the Internal Assessment marks are given for theory and practical. Objective mode of examination was conducted.



Dr. Sapna Baghel
Skill Based Course Coordinator



Dr. Amitabh Halder
IQAC Coordinator
Internal Quality Assurance Cell
(IQAC)
S. S. E. S. A. Science College
Congress Nagar, Nagpur.



Prof. Mahendra Dhore
Principal
Principal
S. S. E. S. Amravati's
Science College, Nagpur.



UG Department of Biotechnology

Skill Based Course: Immunology and Immunodiagnostics (Session 2023-24)

Syllabus of Skill Based Course: Immunology and Immunodiagnostics

Course Units

Unit 1: Medical Microbiology

Bacteria -Morphology, Type of microbial Culture, Staining, Pathogenicity, Lab Diagnosis, Treatment of the following Micro-organisms.

- *Spirochetes*
- *Salmonella*
- Retro Virus (HIV)

Unit 2: Bacterial Growth

Bacterial Growth Media required, Types of Culture Media, Principle and Preparation Procedure of Culture Media, Bacterial Growth Curve.

Unit 3: Immunology

Antigen, Antibody, Immune system, Organs and cells of immune system, Immunity, Innate immunity, Acquired Immunity Humoral Immunity, Cell Mediated Immunity, Disorders of Immune System.

Unit 3: Immunological Techniques

Antigen-Antibody reactions, precipitation, agglutination, complement fixation, Rheumatoid arthritis Test (RA), Immunological Test for pregnancy, Serological Test for Syphilis, Immunological Test for ELISA.

Practicals: Medical Microbiology & Immunology

1. Antigen-Antibody reaction for detection of blood group (ABO System).
2. To determine Rh factor in blood.
3. To perform Pregnancy Test.
4. To Perform Widal Test (Slide Test).
5. To Perform VDRL Test.
6. To perform ELISA Test
7. To Perform HIV-I (Rapid Tri-dot Method).
8. To Perform RPR Test.
9. To Perform RA Test.
10. To Perform Latex Agglutination Test.



Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology
Skill Based Course: Immunology and Immunodiagnostics
(Session 2022-23)
Week-wise teaching plan:

Weeks	Hrs.	Content
		Theory
1	1	Bacteria -Morphology
	1	Staining
	1	Bacteria -Culture,
2	1	Growth curve
	1	Types of Culture
	1	Growth media
3	1	Bacteria - Pathogenicity
	1	Bacteria- Reproduction
	1	Bacteria - Lab Diagnosis
4	1	Treatment of the Micro-organism Spirochetes
	1	Salmonella
	1	Retro Virus
5	1	Immune system
	1	Disorders of immune system
	1	Organs
6	1	Cells of immune system
	1	Primary lymphoid organ
	1	Secondary lymphoid organ
7	1	Immunity
	1	Defense barriers of Immune system
	1	Innate immunity
8	1	Acquired Immunity
	1	Humoral or Antibody mediated Immunity
	1	Cell mediated Immunity
9	1	Antigen
	1	Antibody
	1	Antigen-Antibody reactions
10	1	Erythroblastosis-fetalis
	1	Precipitation
	1	Types of precipitation
11	1	Agglutination
	1	Complement fixation
	1	Serological Test for Syphilis
12	1	Immunological Test for pregnancy
	1	Rheumatoid arthritis Test (RA)

	1	Immunological Test for ELISA
13	1	Types of ELISA
	1	Practical
14	1	Antigen-Antibody reaction for detection of blood group
	1	To determine Rh factor in blood
	1	To perform pregnancy test
15	1	To perform Widal test
	1	To perform RPR test
	1	To perform RA test
	1	To perform Latex agglutination test
	1	To perform ELISA test



S. Baghel

Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology
Skill Based Course: Immunology and Immunodiagnostics (Session 2023-24)
Skill Based Course: Immunology and Immunodiagnostics

w.e.f. 18/03/2024

Time Table

Days	Class	1	2	3	4	5	6	7	8	9	10
		07:30-08:18	08:18-09:06	09:06-09:54	10:00-10:48	10:48-11:36	11:36-12:24	12:44-01:32	01:32-02:20	02:20-03:08	03:12-5:36
Monday & Tuesday	I				BT-C5 PT						IDCC Theory Biotech Lab SB
	II								BT-C6 MB		
	III					BT-B3 SB		----- BT B5 ----- PT			
Wednesday & Thursday	I						BT-C7 SB(Wed) PT(Thur)	----- BT B6 ----- MB			IDCC Theory Biotech Lab SB
	III	----- BT B5 ----- SB				BT-B2 MB(Wed) SB(Thur)					
	III									BT-C7 PT(Wed) MB(Thur)	
Friday & Saturday	I						BT-C5 PT	----- BT B5 ----- MB			IDCC Practical Biotech Lab SB
	II				----- BT B6 ----- SB					BT-C5 SB	
	III	----- BT B6 ----- PT				BT-B2 MB					

Teaching Faculty: MB- Mayuri Bhad, **SB-** Dr. Sapna Baghel, **PT-** Payal Talekar



Sapna Baghel

Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR

UG Department of Biotechnology

EXAMINATION NOTICE

Date: 08/07/2024

All the students enrolled for **Skill Based Course: Immunology and Immunodiagnosics** for the session 2023-24 are informed that Theory and Practical Exam of the course is scheduled on 16/07/2024. All the appearing students are informed to remain present in Biotechnology Laboratory at 10:30 – 11:30AM AM for Theory Exam and at 12:30PM – 5:30PM for Practical Exam.



Dr. Sapna Baghel
Course- Coordinator
Skill Based Course



S.S.E.S.A's Science College, Congress Nagar, Nagpur
 DEPARTMENT OF BIOTECHNOLOGY
 Skill based Certificate Course: Immunology and Immunodiagnosics
 Session 2023- 2024
 Attendance Sheet for Theory Exam

Date 16-07-2024

Sr. No	Roll No.	Name of the Candidate	Signature of the Candidate	Signature of the of the Invigilator
1.	2023001	Aditi Ramkrishnaji Gurve	- ABSENT -	
2.	2023002	Aditya Anand Waghmare	<i>Aditya</i>	<i>Table</i>
3.	2023003	Akansha Vijay Tekade	<i>Akansha</i>	<i>Table</i>
4.	2023004	Anisha Arvind Shende	<i>Anisha</i>	<i>Table</i>
5.	2023005	Anobha Narendra Madre	- ABSENT -	
6.	2023006	Anuradha Purushottam Khope	<i>Anuradha</i>	<i>Table</i>
7.	2023007	Anushka Vikram Wagh	<i>A.V. Wagh</i>	<i>Table</i>
8.	2023008	Arshiya Shaikh Mushtaque	<i>Arshiya</i>	<i>Table</i>
9.	2023009	Aryan Shripad Joshi	<i>Aryan</i>	<i>Table</i>
10.	2023010	Ashwini Yuvraj Sidam	- ABSENT -	
11.	2023011	Astha Sanjay Nagbhidkar	<i>Astha</i>	<i>Table</i>
12.	2023012	Ayushi Rupesh Sirsath	<i>Ayushi</i>	<i>Table</i>
13.	2023013	Chetana Shaktiprasad Das	<i>Chetana</i>	<i>Table</i>
14.	2023014	Durgesh Gokul Pandey	<i>Durgesh</i>	<i>Table</i>
15.	2023015	Eshika Raju Parmar	<i>Eshika</i>	<i>Table</i>
16.	2023016	Gargi Shailesh Garode	<i>Gargi</i>	<i>Table</i>
17.	2023017	Gayatri Ravi Bhise	<i>G.R. Bhise</i>	<i>Table</i>
18.	2023018	Harshal Dilip Upadhye	<i>Harshal</i>	<i>Table</i>
19.	2023019	Humera Afroz	<i>Humera</i>	<i>Table</i>
20.	2023020	Ishika Amarnath Pandey	<i>Ishika</i>	<i>Table</i>
21.	2023021	Ishita Yogesh Padgil	<i>Ishita</i>	<i>Table</i>
22.	2023022	Ishwari Nandkishor Gawande	<i>Ishwari</i>	<i>Table</i>
23.	2023023	Jahanvi Suresh Kumar Tale	<i>Jahanvi</i>	<i>Table</i>
24.	2023024	Janhvi Ravi Kudkelwar	<i>Janhvi</i>	<i>Table</i>
25.	2023025	Jiya Ashok Yadav	<i>Jiya</i>	<i>Table</i>
26.	2023026	Kajal Tulshidas Rahangdale	<i>Kajal</i>	<i>Table</i>
27.	2023027	Kalyani Girish Rajpurohit	- ABSENT -	
28.	2023028	Ketaki Prakash Chaudhari	<i>Ketaki</i>	<i>Table</i>
29.	2023029	Khushi Bhumiraj Rahate	<i>Khushi</i>	<i>Table</i>
30.	2023030	Khushi Rajendra Anmadwar	<i>Khushi</i>	<i>Table</i>
31.	2023031	Leena Narendra Meher	<i>Leena</i>	<i>Table</i>

32.	2023032	Mahi Pramod Manwatkar	<i>Mahi</i>	<i>Table</i>
33.	2023033	Manmeet Kaur Ranjeet Singh Saluja	<i>Manmeet</i>	<i>Table</i>
34.	2023034	Mansi Hanuman Pathe	<i>Mansi</i>	<i>Table</i>
35.	2023035	Mayur Yogeshwar Kadamdhad	<i>Mayur</i>	<i>Table</i>
36.	2023036	Mohini Vinod Raut	- ABSENT -	
37.	2023037	Mrunali Moreswar Waghmare	<i>Mrunali</i>	<i>Table</i>
38.	2023038	Nandini Arvind Wadaskar	<i>Nandini</i>	<i>Table</i>
39.	2023039	Nikhil Jitendra Malik	<i>Nikhil</i>	<i>Table</i>
40.	2023040	Nital Pralhad Patle	<i>Nital</i>	<i>Table</i>
41.	2023041	Nitesh Siddharth Wakde	<i>Nitesh</i>	<i>Table</i>
42.	2023042	Parikshit D Gotmare	<i>Parikshit</i>	<i>Table</i>
43.	2023043	Pranay Rajesh Chaurugade	- ABSENT -	
44.	2023044	Purva Sanjay Kohad	<i>Purva</i>	<i>Table</i>
45.	2023045	Rafiya Anjum Inteyaj Ahmad Sheikh	<i>Rafiya</i>	<i>Table</i>
46.	2023046	Rakhi Basant Chavhan	<i>Rakhi</i>	<i>Table</i>
47.	2023047	Rakhi Sanjay Ninawe	<i>Rakhi</i>	<i>Table</i>
48.	2023048	Rani Basant Bahira	- ABSENT -	
49.	2023049	Rashi Sandeep Sharma	<i>Rashi</i>	<i>Table</i>
50.	2023050	Riya Rajendra Sepurwar	<i>Riya</i>	<i>Table</i>
51.	2023051	Saloni Girish Raut	<i>Saloni</i>	<i>Table</i>
52.	2023052	Samiksha Ghanshyam Khot	<i>Samiksha</i>	<i>Table</i>
53.	2023053	Sanika Dilip Raut	<i>Sanika</i>	<i>Table</i>
54.	2023054	Sejal Shankar Shrirame	<i>Sejal</i>	<i>Table</i>
55.	2023055	Shamim Kausar M Shahzad	<i>Shamim</i>	<i>Table</i>
56.	2023056	Shantanu Singh Chauhan	<i>Shantanu</i>	<i>Table</i>
57.	2023057	Shravani Kawdo Lohakare	<i>Shravani</i>	<i>Table</i>
58.	2023058	Shravani Ramesh Choudhari	<i>Shravani</i>	<i>Table</i>
59.	2023059	Shrishti Ravindra Dhote	<i>Shrishti</i>	<i>Table</i>
60.	2023060	Shrividya Navin Meshram	<i>Shrividya</i>	<i>Table</i>
61.	2023061	Shrushti Yaker	- ABSENT -	
62.	2023062	Shruti Avinash Talhar	<i>Shruti</i>	<i>Table</i>
63.	2023063	Siddhi Madhav Godse	<i>Siddhi</i>	<i>Table</i>
64.	2023064	Siddhi Vyankatesh Buddhalwar	<i>Siddhi</i>	<i>Table</i>
65.	2023065	Snehal Naresh Sahare	<i>Snehal</i>	<i>Table</i>
66.	2023066	Sonali Lande	<i>Sonali</i>	<i>Table</i>
67.	2023067	Sourabhi Rajendra Khaparde	<i>Sourabhi</i>	<i>Table</i>
68.	2023068	Tejasvi Nitin Hadge	<i>Tejasvi</i>	<i>Table</i>
69.	2023069	Vaibhav Vilesh Thakkar	- ABSENT -	
70.	2023070	Vaidhehi Vivek Telang	<i>Vaidhehi</i>	<i>Table</i>
71.	2023071	Vaishnavi Raju Nannawre	- ABSENT -	
72.	2023072	Vaishnavi Vinayak Ingle	<i>Vaishnavi</i>	<i>Table</i>

73.	2023073	Vami Kishor Masram	<i>Vami</i>	<i>Pharma.</i>
74.	2023074	Vinars Narayan Patle	<i>Vinars</i>	<i>Pharma.</i>
75.	2023075	Yash Dilip Giri	<i>Yash</i>	<i>Pharma.</i>

Name of the Invigilator's -

- Ms. Payal Talekar - *Payal* 16/7/24
- Dr. Sapna Baghel - *Sapna*
- Mrs. Sanika Tekade - *Sanika* 16/7/24
- Mr. Piyushkumar R. Sharma - *Sharma* 16/07/2024.



Sapna Baghel
 Dr. Sapna Baghel

DEPARTMENT OF BIOTECHNOLOGY

Skill based Certificate Course: Immunology and Immunodiagnosics

Session 2023- 2024

Attendance Sheet for Practical Exam

Date 16-07-2024

Sr. No	Roll No.	Name of the Candidate	Signature of the Candidate
1.	2023001	Aditi Ramkrishnaji Gurve	- ABSENT -
2.	2023002	Aditya Anand Waghmare	<i>Aditya</i>
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4.	2023004	Anisha Arvind Shende	<i>Anisha</i>
5.	2023005	Anobha Narendra Madre	- ABSENT -
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7.	2023007	Anushka Vikram Wagh	<i>Anushka</i>
8.	2023008	Arshiya Shaikh Mushtaque	<i>Arshiya</i>
9.	2023009	Aryan Shripad Joshi	<i>Aryan</i>
10.	2023010	Ashwini Yuvraj Sidam	- ABSENT -
11.	2023011	Astha Sanjay Nagbhikdar	<i>Astha</i>
12.	2023012	Ayushi Rupesh Sirsath	<i>Ayushi</i>
13.	2023013	Chetana Shaktiprasad Das	<i>Chetana</i>
14.	2023014	Durgesh Gokul Pandey	<i>Durgesh</i>
15.	2023015	Eshika Raju Parmar	<i>Eshika</i>
16.	2023016	Gargi Shailesh Garode	<i>Gargi</i>
17.	2023017	Gayatri Ravi Bhise	<i>G. R. Bhise</i>
18.	2023018	Harshal Dilip Upadhye	<i>Harshal</i>
19.	2023019	Humera Afroz	<i>Humera</i>
20.	2023020	Ishika Amarnath Pandey	<i>Ishika</i>
21.	2023021	Ishita Yogesh Padgil	<i>Ishita</i>
22.	2023022	Ishwari Nandkishor Gawande	<i>Ishwari</i>
23.	2023023	Jahanvi Suresh Kumar Tale	<i>Jahanvi</i>
24.	2023024	Janhvi Ravi Kudkelwar	<i>Janhvi</i>

25.	2023025	Jiya Ashok Yadav	<i>Jiya</i>
26.	2023026	Kajal Tulshidas Rahangdale	<i>Kajal</i>
27.	2023027	Kalyani Girish Rajpurohit	- ABSENT -
28.	2023028	Ketaki Prakash Chaudhari	<i>Ketaki</i>
29.	2023029	Khushi Bhumiraj Rahate	<i>Khushi</i>
30.	2023030	Khushi Rajendra Anmadwar	<i>Khushi</i>
31.	2023031	Leena Narendra Mehcar	<i>Leena</i>
32.	2023032	Mahi Pramod Manwatkar	<i>Mahi</i>
33.	2023033	Manmeet Kaur Ranjeet Singh Saluja	<i>Manmeet</i>
34.	2023034	Mansi Hanuman Pathe	<i>Mansi</i>
35.	2023035	Mayur Yogeshwar Kadamdhad	<i>Mayur</i>
36.	2023036	Mohini Vinod Raut	- ABSENT -
37.	2023037	Mrunali Moreshtar Waghmare	<i>Mrunali</i>
38.	2023038	Nandini Arvind Wadaskar	<i>Nandini</i>
39.	2023039	Nikhil Jitendra Malik	<i>Nikhil</i>
40.	2023040	Nital Pralhad Patle	<i>Nital</i>
41.	2023041	Nitesh Siddharth Wakde	<i>Nitesh</i>
42.	2023042	Parikshit D Gotmare	<i>Parikshit</i>
43.	2023043	Pranay Rajesh Chauragade	- ABSENT -
44.	2023044	Purva Sanjay Kohad	<i>Purva</i>
45.	2023045	Rafiya Anjum Inteyaj Ahmad Sheikh	<i>Rafiya</i>
46.	2023046	Rakhi Basant Chavhan	<i>Rakhi</i>
47.	2023047	Rakhi Sanjay Ninawe	<i>Rakhi</i>
48.	2023048	Rani Basant Bahira	- ABSENT -
49.	2023049	Rashi Sandeep Sharma	<i>Rashi</i>
50.	2023050	Riya Rajendra Sepurwar	<i>Riya</i>
51.	2023051	Saloni Girish Raut	<i>Saloni</i>
52.	2023052	Samiksha Ghanshyam Khot	<i>Samiksha</i>
53.	2023053	Sanika Dilip Raut	<i>Sanika</i>
54.	2023054	Sejal Shankar Shirrame	<i>Sejal</i>
55.	2023055	Shamim Kausar M Shahzad	<i>Shamim</i>
56.	2023056	Shantanu Singh Chauhan	<i>Shantanu</i>

60.	2023060	Shravin Navin Meshram	- ABSENT -
61.	2023061	Shrushti Yaker	<i>Shrushti</i>
62.	2023062	Shruti Avinash Talhar	<i>Shruti</i>
63.	2023063	Siddhi Madhav Godse	<i>Siddhi</i>
64.	2023064	Siddhi Vyankatesh Buddhalwar	<i>Siddhi</i>
65.	2023065	Snehal Naresh Sahare	<i>Snehal</i>
66.	2023066	Sonali Lande	<i>Sonali</i>
67.	2023067	Sourabhi Rajendra Khaparde	<i>Sourabhi</i>
68.	2023068	Tejasvi Nitin Hadge	<i>Tejasvi</i>
69.	2023069	Vaibhav Vilesh Thakkar	- ABSENT -
70.	2023070	Vaidehi Vivek Telang	<i>Vaidehi</i>
71.	2023071	Vaishnavi Raju Nannawre	- ABSENT -
72.	2023072	Vaishnavi Vinayak Ingle	<i>Vaishnavi</i>
73.	2023073	Vami Kishor Masram	<i>Vami</i>
74.	2023074	Vinars Narayan Patle	<i>Vinars</i>
75.	2023075	Yash Dilip Giri	<i>Yash</i>



Dr. Sapna Baghel
Dr. Sapna Baghel

Rashtrasant Tukadoji Maharaj Nagpur University

Exam Name: Skill based Certificate Course Examination, Summer- 2023-24

Name of Subject: Immunology and Immunodiagnostics

Medium: English

Marks Obtained:

Centre Name: Science College Congress Nagar, Nagpur

Name of Student:

Class:

Group:

Roll Number:

Duration: 1hr

Max Marks: 50

Invigilator's Sign

Signature of Examiner

.....

Note:

- 1) Each Question Carries 2 Marks.
- 2) Each Question is Compulsory.
- 3) No Negative Marking

1. Which stain is used to identify acid-fast bacteria such as Mycobacterium tuberculosis?
 - a) Gram stain
 - b) Ziehl-Neelsen stain
 - c) PAS stain
 - d) Alcian blue stain
2. In an antibody molecule, each light chain is bound to heavy chain by which force?
 - a) Disulfide bridges
 - b) Electrostatic force
 - c) Covalent interactions
 - d) Hydrogen bonding
3. Match the following:

1) Precipitation	A) Radioimmunoassay
2) Agglutination	B) Clumping

3) Quantitative method	C) Precipitin
------------------------	---------------

- a) 1-A, 2-C, 3-B
 - b) 1-C, 2-B, 3-A
 - c) 1-B, 2-A, 3-C
4. Endoflagellum is present in which class of bacteria?
- a) Spirilla
 - b) Spirochetes
 - c) Bacillus
 - d) Coccus
5. The type of ELISA in which antigen is sandwiched between two antibodies is known as:
- a) Direct ELISA
 - b) Sandwich ELISA
 - c) Indirect ELISA
 - d) Competitive ELISA
6. The type of immunoglobulin which is present in tears, saliva, colostrum:
- a) IgD
 - b) IgE
 - c) IgA
 - d) IgM
7. Which of the following is an example of primary lymphoid organ from the given options ?
- a) Bone marrow
 - b) Spleen
 - c) Lymph node
 - d) GALT
8. Which one of the following is the serological test for detection of salmonella infected typhoid fever?
- a) Immunodiffusion
 - b) HCG test
 - c) ELISA
 - d) Widal test
9. The first symptom of rheumatoid arthritis (RA) is most often:
- a) Pain in the joints of the hands and feet

- b) Pain in the hips and shoulders
 - c) Headache
 - d) All of the above
10. Which class of antibodies is the most abundant in blood ?
- a) IgA
 - b) IgG
 - c) IgD
 - d) IgE
11. How were retroviruses discovered ?
- a) In chickens as Rous sarcoma
 - b) In humans as HTLV-1
 - c) In mice causing leukaemia
 - d) In cat causing leukaemia
12. Which of the following cells are primarily involved in cell-mediated immunity?
- a) T cells
 - b) B cells
 - c) Mast cells
 - d) Basophils
13. Lag phase is also known as _____
- a) Period of initial adjustment
 - b) Transitional period
 - c) Generation time
 - d) Period of rapid growth
14. Which of the following statements is true about the IgM of humans?
- a) IgM can cross the placenta
 - b) IgM can protect the mucosal surface
 - c) IgM is produced by high-affinity plasma cells
 - d) IgM is primarily restricted in the circulation
15. Which of the following is a characteristic of gram-negative bacteria?
- a) Retain crystal violet stain
 - b) Thick peptidoglycan layer
 - c) Lipopolysaccharide outer membrane
 - d) Purple color when stained
16. Which of the following does not act as a protecting barrier for the body surface
- a) Skin

- b) Mucus
- c) Gastric
- d) Salivary amylase

17. Which term refers to the ability of a pathogen to cause disease?

- a) Virulence
- b) Pathogenicity
- c) Infectivity
- d) Resistance

18. Who published the first report about the ability of antibody to clump cells based on the observation of agglutination of bacterial cells by serum-----

- a) Gruber and Durham
- b) Nocard and Roux
- c) Paul Ehrlich
- d) Both b and c

19. Syphilis is a term that is frequently used.

- a) The dictator who cannot be seen
- b) The world's greatest imitator
- c) The apocalyptic figure of the great terminator
- d) The emperor who terrorises the people

20. What is a retrovirus?

- a) A virus that infects only bacteria
- b) A virus that contains DNA as its genetic material
- c) A virus that infects only plants
- d) A virus that uses RNA as its genetic material

21. *Salmonella typhi* is causative organism of

- a) Undulant fever
- b) Remittent fever
- c) Dengue fever
- d) Enteric fever

22. Who described the first human retrovirus?

- a) Peyton Rous
- b) Bob Gallo
- c) Temin
- d) Baltimore

23. The molecular weight of the compounds to be immunogenic must be

- a) <1000 Da
- b) 3000 Da
- c) 2000 Da
- d) >6000 Da

24. What is an antigen

- a) A type of white blood cell
- b) A molecule that can induce an immune response
- c) A type of antibody
- d) A cell that engulfs pathogens

25. Identify the CORRECT statement from the following sentences given below?

- a) All immunogen are antigens and all antigens are immunogens.
- b) All immunogens are antigens but NOT all antigens are immunogens.
- c) All immunogens are NOT antigens but all antigens are immunogens.
- d) All immunogens are NOT antigens but all antigens are NOT immunogens.



Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology

**Exam Name: Skill Based Course: Immunology and Immunodiagnostics
(Session 2023-24)**

Answer key

- 1) b) Ziehl-Neelsen stain
- 2) a) Disulfide bridges
- 3) b) 1-C, 2-B, 3-A
- 4) b) Spirochetes
- 5) b) Sandwich ELISA
- 6) c) IgA
- 7) a) Bone marrow
- 8) d) Widal test
- 9) a) Pain in the joints of the hands and feet
- 10) b) IgG
- 11) a) In chickens as Rous sarcoma
- 12) a) T cells
- 13) a) period of initial adjustment
- 14) d) IgM is primarily restricted in the circulation.
- 15) c) Lipopolysaccharide outer membrane
- 16) d) Salivary amylase
- 17) b) Pathogenicity
- 18) a) Gruber and Durham
- 19) b) The world's greatest imitator
- 20) d) A virus that uses RNA as its genetic material
- 21) d) Enteric fever
- 22) b) Bob Gallo
- 23) d) >6000 Da
- 24) b) A molecule that can induce an immune response
- 25) b) All immunogens are antigens but NOT all antigens are immunogens



Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology
Skill Based Course: Immunology and Immunodiagnostics
(Session 2023-24)

Practical Exam Question Paper:

Subject : Immunology and Immunodiagnostics

Center : S.S.E.S. A's Science College, Nagpur

Time : 5 hrs per day

Dates : 16/07/2024

Max. Marks: 40

Q.1	To determine blood group and Rh factor of the given blood sample.	10
Q.2	To Perform Rheumatoid Arthritis (RA) Test	10
Q.4	Viva-Voce	10
Q.5	Practical Record	10
	Total Marks	40



Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology
Skill Based Course: Immunology and Immunodiagnostics
(Session 2023-24)

OMR Answer Sheet



Shri Shivaji Education Society, Amravati's
SCIENCE COLLEGE
 Congress Nagar, Nagpur-12 (M.S.), India



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 Institutional Member of APQN
 Recognized Centre for Higher Learning and Research
 Mentor College under 'PARAMARSH Scheme', UGC, New Delhi

U.G. DEPARTMENT OF BIOTECHNOLOGY

Skill Based Course			
Course Exam Name: Immunology and Immunodiagnostics			
Name of Student: Durgesh Pandey		INSTRUCTIONS FOR FILLING THE SHEET 1. This sheet should not be folded or crushed. 2. Use only blue/ black ball point pen to fill the circles. 3. Use of pencil is strictly prohibited. 4. Circles should be darkened completely and properly. 5. Cutting and erasing on this sheet is not allowed. 6. Do not use any stray marks on the sheet. 7. Do not use marker or white fluid to hide the mark. WRONG METHODS CORRECT METHOD 	
Roll No.: [][][]	Session: 2023-24		
Test Date: 16/07/2024	Max. Marks: 50		
Invigilator Signature: 	Obtained Marks: [44]		

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

UG Department of Biotechnology
Mark List: Skill Based Course: Immunology and Immunodiagnostics
(Session 2023-24)

Sr. No	Name of the Student	Marks obtained out of 50 (Theory)	Marks obtained out of 10 (Theory Internals)	Marks obtained out of 40 (Practical)	Total marks out of 100	Grade
1)	Aditi Ramkrishnaji Gurve	AB	AB	AB	AB	AB
2)	Aditya Anand Waghmare	32	10	39	81	A+
3)	Akansha Vijay Tekade	32	10	38	80	A
4)	Anisha Arvind Shende	38	09	38	85	A+
5)	Anobha Narendra Madre	AB	AB	AB	AB	AB
6)	Anuradha Purushottam Khope	40	10	38	88	A+
7)	Anushka Vikram Wagh	36	10	37	83	A+
8)	Arshiya Shaikh Mushtaque	24	10	37	71	A
9)	Aryan Shripad Joshi	40	10	36	86	A+
10)	Ashwini Yuvraj Sidam	AB	AB	AB	AB	AB
11)	Astha Sanjay Nagbhidkar	18	10	37	65	B+
12)	Ayushi Rupesh Sirsath	24	10	38	72	A
13)	Chetana Shaktiprasad Das	34	10	39	83	A+
14)	Durgesh Gokul Pandey	44	10	38	92	O
15)	Eshika Raju Parmar	36	10	36	82	A+
16)	Gargi Shailesh Garode	24	10	37	71	A
17)	Gayatri Ravi Bhise	30	10	38	78	A
18)	Harshal Dilip Upadhye	38	10	38	86	A+
19)	Humera Afroz	42	10	39	91	O
20)	Ishika Amarnath Pandey	44	10	40	94	O
21)	Ishita Yogesh Padgil	26	10	38	74	A
22)	Ishwari Nandkishor Gawande	38	10	38	86	A+
23)	Jahanvi Suresh Kumar Tale	32	10	39	81	A+
24)	Janhvi Ravi Kudkelwar	24	10	38	72	A

25)	Jiya Ashok Yadav	22	10	39	71	A
26)	Kajal Tulshidas Rahangdale	28	10	38	76	A
27)	Kalyani Girish Rajpurohit	AB	AB	AB	AB	AB
28)	Ketaki Prakash Chaudhari	38	10	40	88	A+
29)	Khushi Bhumiraj Rahate	42	10	39	91	O
30)	Khushi Rajendra Anmadwar	46	10	39	95	O
31)	Leena Narendra Meher	40	10	39	89	A+
32)	Mahi Pramod Manwatkar	42	10	39	91	O
33)	Manmeet Kaur Ranjeet Singh Saluja	40	10	38	88	A+
34)	Mansi Hanuman Pathe	30	10	36	76	A
35)	Mayur Yogeshwar Kadamdhad	46	10	37	93	O
36)	Mohini Vinod Raut	AB	AB	AB	AB	AB
37)	Mrunali Moreshwar Waghmare	32	10	37	79	A
38)	Nandini Arvind Wadaskar	36	10	38	84	A+
39)	Nikhil Jitendra Malik	42	10	37	89	A+
40)	Nital Pralhad Patle	40	09	36	85	A+
41)	Nitesh Siddharth Wakde	34	10	37	81	A+
42)	Parikshit D Gotmare	20	10	37	67	B+
43)	Pranay Rajesh Chauragade	AB	AB	AB	AB	AB
44)	Purva Sanjay Kohad	28	10	37	75	A
45)	Rafiya Anjum Inteyaj Ahmad Sheikh	42	10	37	89	A+
46)	Rakhi Bharat Chavhan	28	10	37	75	A
47)	Rakhi Sanjay Ninawe	32	10	37	79	A
48)	Rani Basant Bahira	AB	AB	AB	AB	AB
49)	Rashi Sandeep Sharma	30	10	38	78	A
50)	Riya Rajendra Sepurwar	42	10	39	91	O
51)	Saloni Girish Raut	36	10	37	83	A+
52)	Samiksha Ghanshyam Khot	34	10	37	81	A+
53)	Sanika Dilip Raut	26	10	39	75	A
54)	Sejal Shankar Shrirame	44	10	39	93	O

55)	Shamim Kausar M Shahzad	24	10	37	71	A
56)	Shantanu Singh Chauhan	44	10	38	92	O
57)	Shravani Kawdoo Lohakare	38	10	37	85	A+
58)	Shravani Ramesh Choudhari	28	10	37	75	A
59)	Shrishti Ravindra Dhote	36	10	37	83	A+
60)	Shrivin Navin Meshram	AB	AB	AB	AB	AB
61)	Shrushti Yaker	22	10	38	70	B+
62)	Shruti Avinash Talhar	34	10	38	82	A+
63)	Siddhi Madhav Godse	40	10	39	89	A+
64)	Siddhi Vyankatesh Buddhalwar	28	10	39	77	A
65)	Snehal Naresh Sahare	30	10	37	77	A
66)	Sonali Lande	38	10	37	85	A+
67)	Sourabhi Rajendra Khaparde	26	10	38	74	A
68)	Tejasvi Nitin Hadge	24	10	39	73	A
69)	Vaibhav Vilesh Thakkar	AB	AB	AB	AB	AB
70)	Vaidehi Vivek Telang	36	10	38	84	A+
71)	Vaishnavi Raju Nannawre	AB	AB	AB	AB	AB
72)	Vaishnavi Vinayak Ingle	28	10	37	75	A
73)	Vami Kishor Masram	28	10	37	75	A
74)	Vinars Narayan Patle	42	10	37	89	A+
75)	Yash Dilip Giri	32	10	37	79	A



S. Baghel

Dr. Sapna Baghel
Course- Coordinator
Skill Based Course

UG Department of Biotechnology

Skill Based Course: Immunology and Immunodiagnostics

(Session 2023-24)

Feedback form

Thank you for participating in our Immunology and Immunodiagnostics course. Your feedback is crucial in helping us improve the course and enhance your learning experience. Please take a few moments to complete this feedback form.

Que. 1 How would you rate the overall quality of the Certificate Course – Immunology and Immunodiagnostics

- a) Excellent
- b) Good
- c) Average

Que. 2 How well did the Certificate Course - Immunology and Immunodiagnostics meet your expectations?

- a) Exceeded expectations
- b) Met expectations
- c) Below expectations

Que. 3 How effective were the course instructors in delivering the Certificate Course - Immunology and Immunodiagnostics

- a) Very effective
- b) Effective
- c) Ineffective

Que. 4 How likely are you to recommend the Certificate Course – Immunology and Immunodiagnostics to others?

- a) Very Likely
- b) Likely
- c) Unlikely

Que. 5 How satisfied are you with the practical sessions of the Certificate Course - Immunology and Immunodiagnostics?

- a) Very Satisfied
- b) Satisfied
- c) Dissatisfied

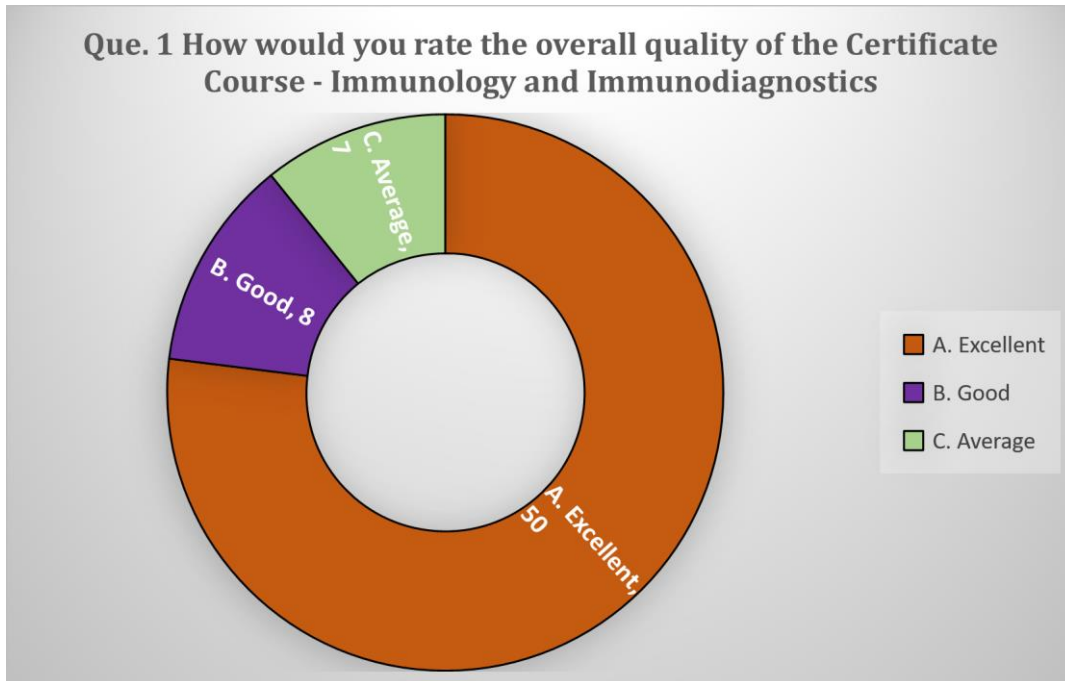
UG Department of Biotechnology

Skill Based Course: Immunology and Immunodiagnostics

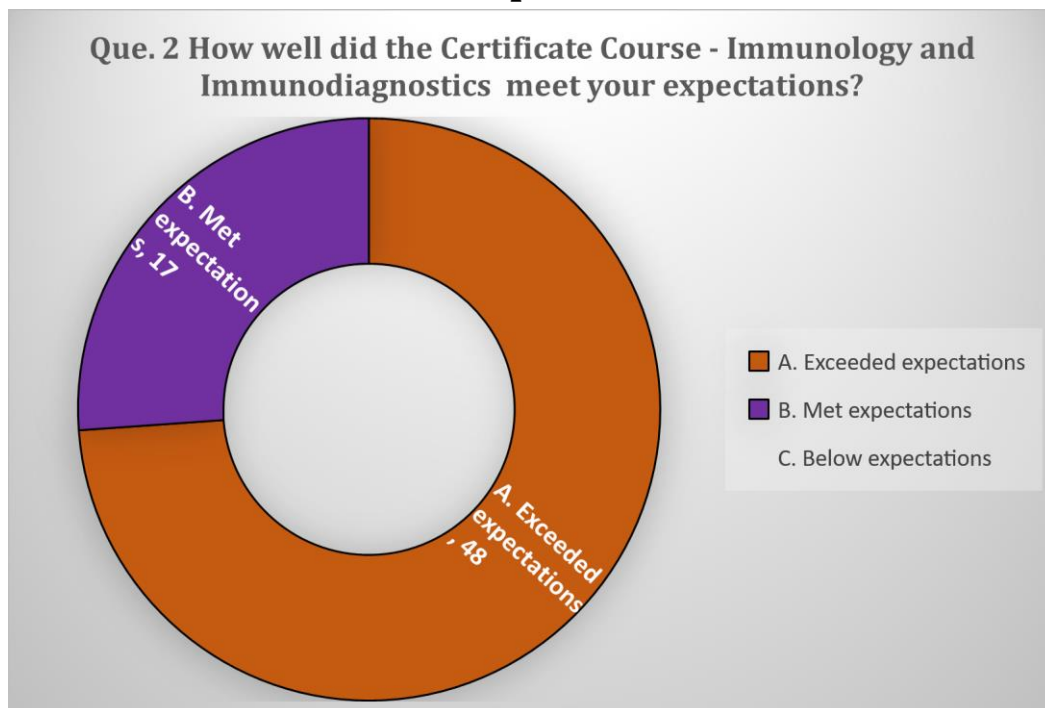
(Session 2022-23)

Feedback Response

65 responses

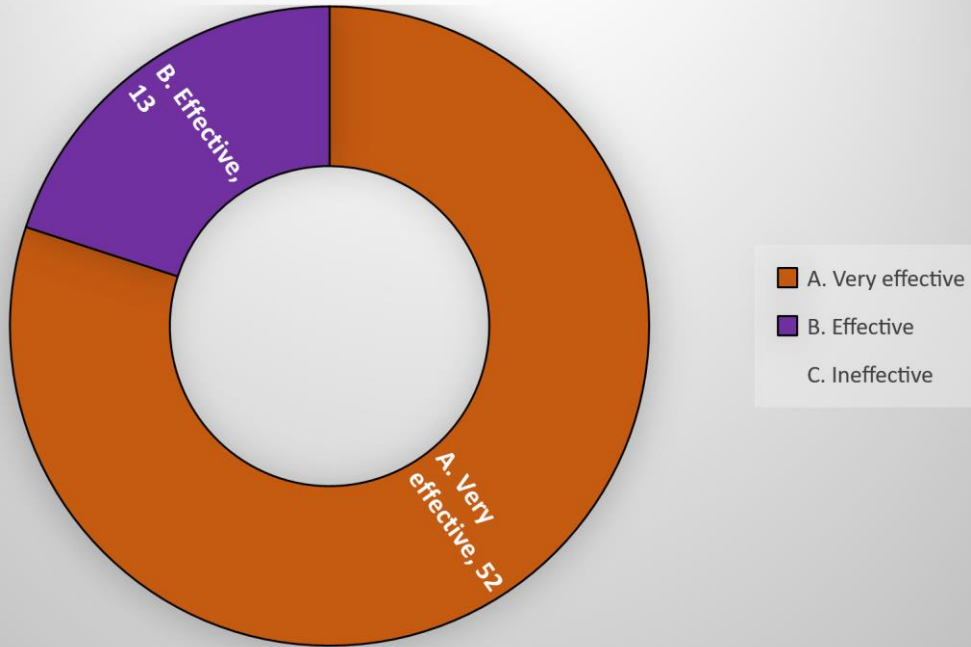


65 responses



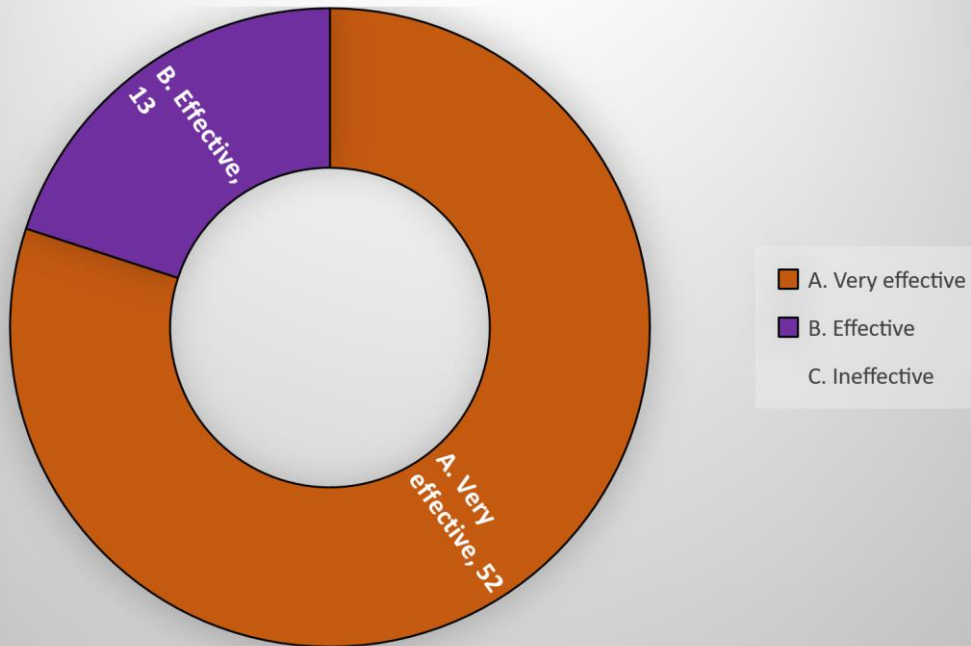
65 responses

Que. 3 How effective were the course instructors in delivering the Certificate Course - Immunology and Immunodiagnostics



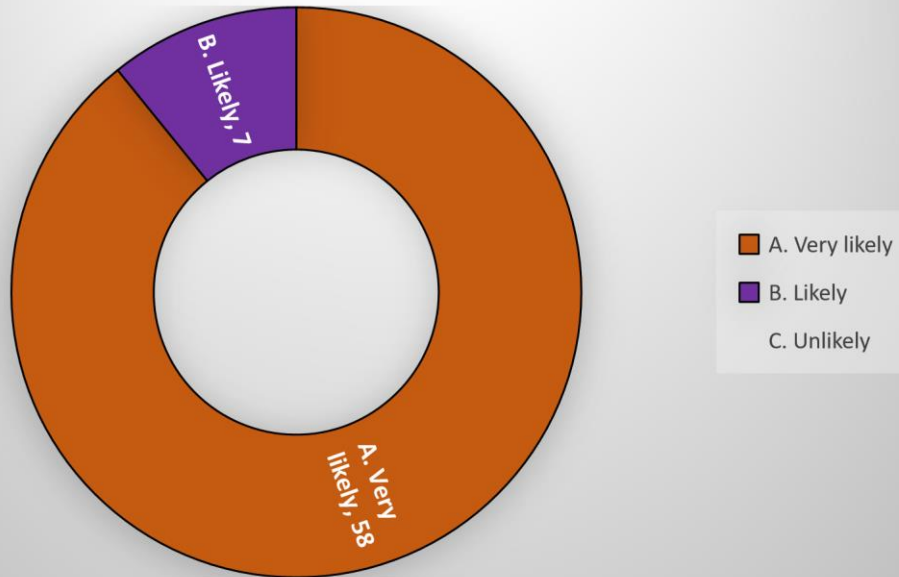
65 responses

Que. 3 How effective were the course instructors in delivering the Certificate Course - Immunology and Immunodiagnostics



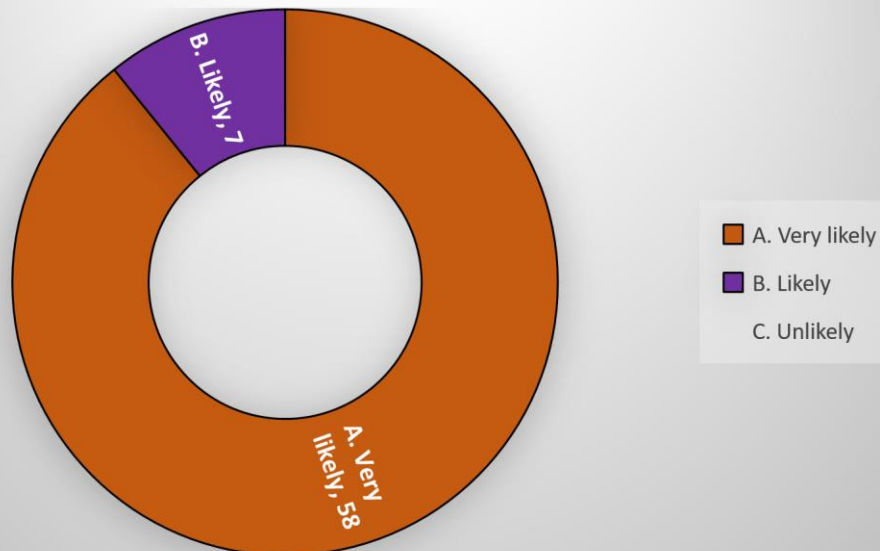
65 responses

Que. 4 How likely are you to recommend the Certificate Course
- Immunology and Immunodiagnostics to others?



65 responses

Que. 4 How likely are you to recommend the Certificate Course
- Immunology and Immunodiagnostics to others?



Dr. Sapna Baghel
Course- Coordinator
Add on Course



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