



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

Department of Biotechnology

**Skill-Based Certificate Course: Immunology & Immunodiagnosics
Session 2022-2023**

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
UNIVERSITY OF KNOWLEDGE, CULTURE, SKILLS AND ENTREPRENEURSHIP
DEPARTMENT OF LIFELONG LEARNING AND EXTENSION
Gurunanki Bhavan, University Campus, Amravati Road, Nagpur - 440 033. Phone - 2630860
 E-mail - staff_rtl@rtnu@gmail.com

To,
The Principal
SSIES Am's Science College, Congress Nagar, Nagpur.

No. DOLLE/ 305/22
Dated : 12.08.2022

**Subject : Sanction for Conducting Short Term Courses under Jeevan Shikshan
Abhiyan on No Grant Basis. (2022-23)**

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:

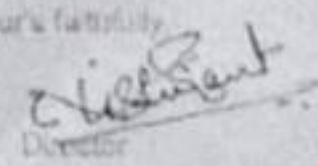
Details of the Course

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 Dept.
1	Certificate Course in Environment and Water Management.	Prof. Yogita K. Meshram	43 hrs. (15 Weeks)	2	20	1500/-	10%
2	Certificate Course in Ground Water Exploration.	Ms. P. B. Zamarkar	45 hrs. T- 16 hrs. P- 09 hrs.	2	40	1500/-	10%
3	Certificate Course in Mushroom Cultivation.	Dr. R. H. Mahabode	40 hrs. T- 20 hrs. P- 20 hrs.	2	40	1500/-	10%
4	Certificate Course in Immunology and Immunodiagnosics.	Dr. Deepthi Hynal	44 hrs. T- 36 hrs. P- 08 hrs.	2	20	1500/-	10%
5	Certificate Course in Fruit Processing and Wine Technology.	Dr. Pranita B. Gulhane	45 hrs. T- 37 hrs. P- 08 hrs.	2	20	1500/-	10%

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

- Owing to Covid-19 situations all the norms of Central & State Government and instructions by R.T.M. Nagpur University, Nagpur 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.

Also send a soft copy in CD/Pen drive.

Your's faithfully

 Director



Gulhane
Dr. Pranita Gulhane

List of the Students: Skill Based Certificate Course- Immunology & Immunodiagnostics

(Session 2022-23)

Sr. No.	Name of Student	Signature
1)	Adithya A. Kallattu	<i>Adithya</i>
2)	Akanksha Barde	<i>Ab</i>
3)	Akanksha R. Kale	<i>A. Kale</i>
4)	Arya P. Buradkar	<i>APB</i>
5)	Dibina Dinakaran	<i>Dinakaran</i>
6)	Ekta Gaikwad	<i>Gaikwad</i>
7)	Falguni Y. Jichkar	<i>Falguni</i>
8)	Gaurav Selokar	<i>Gaurav Selokar</i>
9)	Ishita Lakkewar	<i>Ishita</i>
10)	Janhavi Choudhari	<i>Janhavi</i>
11)	Janvi S. Jagtap	<i>Janvi Jagtap</i>
12)	Khushbu R. Vaidya	<i>Khushbu</i>
13)	Mitali R. Jaiswal	<i>Mitali</i>
14)	Nidhi Yadav	<i>Nidhi</i>
15)	Nimisha Kalkotwar	<i>Nimisha</i>
16)	Nishita Ninave	<i>Nishita</i>
17)	Parth Gadgilwar	<i>Parth</i>
18)	Pranoti H. Jadhav	<i>Pranoti Jadhav</i>
19)	Radhika P. Kokate	<i>Radhika</i>
20)	Rakhi Waratkar	<i>Rakhi Waratkar</i>
21)	Reeta P. Bhawalkar	<i>Reeta Bhawalkar</i>
22)	Sahil P. Titarmare	<i>Sahil</i>
23)	Sakshee Shahu	<i>Sakshee</i>
24)	Saloni S. Dhole	<i>Saloni</i>
25)	Snehal M. Patle	<i>Snehal</i>
26)	Sushant Nimbhorkar	<i>Sushant</i>



Pranita
Do. Pranita Gullane

**Marklist: Skill Based Certificate Course- Immunology &
Immunodiagnosics (Session 2022-23)**

Sr. No	Name of the Student	Marks obtained out of 50 (Theory)	Marks obtained out of 10 (Internals)	Marks obtained out of 40 (Practical)	Total marks out of 100
1)	Adithya A. Kallattu	50	10	40	100
2)	Akanksha Barde	44	10	40	94
3)	Akanksha R. Kale	50	09	38	97
4)	Arya P. Buradkar	44	10	38	92
5)	Dibina Dinakaran	46	10	40	96
6)	Ekta Gaikwad	50	10	40	100
7)	Falguni Y. Jichkar	46	09	38	93
8)	Gaurav Selokar	44	10	38	92
9)	Ishita Lakkewar	42	09	40	91
10)	Janhavi Choudhari	46	09	38	93
11)	Janvi S. Jagtap	46	09	38	93
12)	Khushbu R. Vaidya	48	09	40	97
13)	Mitali R. Jaiswal	46	10	38	94
14)	Nidhi Yadav	42	10	40	92
15)	Nimisha Kalkotwar	28	09	36	73
16)	Nishita Ninave	42	09	38	89
17)	Parth Gadgilwar	36	10	40	86
18)	Pranoti H. Jadhav	26	09	36	71
19)	Radhika P. Kokate	42	09	38	89
20)	Rakhi Waratkar	40	10	40	90
21)	Reeta P. Bhawalkar	42	10	40	92
22)	Sahil P. Titarmare	28	09	36	73
23)	Sakshee Shahu	44	09	38	91
24)	Saloni S. Dhole	38	09	38	85
25)	Snehal M. Patle	36	09	38	83
26)	Sushant Nimbhorkar	50	10	40	100



Pranita Gullane
Dr. Pranita Gullane

Activity Report: Skill Based Certificate Course- Immunology & Immunodiagnosics (Session 2022-23)

The skill base certificate course syllabus for B.Sc. I, II and III appear students. Fifteen weeks' certificate course in IMMUNOLOGY AND IMMUNODIAGNOSTICS. The examination of course shall comprise of one theory paper of three hours carries 50 marks and practical of one-hour duration carries 50 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. The structure of syllabus for certificate course along with distribution of marks is also displayed in the following table.

Course	Theory papers and Practicals	Marks			Total marks
		Theory	Internal assessment	Practical	
Certificate course in Immunology and Immunodiagnosics	1. Theory paper - Immunology and Immunodiagnosics	50	10		100
	2. Practicals 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.

Intercollegiate workshop on "Intellectual Learning Strategies & Skill Development" on the occasion of 125th Birth Year Celebration of Dr. Panjabrao alias Bhausaheb



Poulkane
Dr. Poojita Gulane

Deshmukh, Centenary Year Celebration of R.T.M. Nagpur University & National Science Day was organized by Department of Microbiology, S.S.E.S.A's Science College, Nagpur on 4th March, 2023. The workshop was conducted under the chairmanship of Hon'ble Prof. Mahendra P. Dhore, Principal, Science College, Nagpur, Coordinator- Respected Prof. Atul D. Bobdey and Convener- Dr. Pranita B. Gulhane. Verbal Welcome to Hon'ble Dignitaries, Guest Speaker & Participants was done by Dr. Priya Fuke ma'am. The Presidential address was by Hon'ble Principal Prof. Mahendra Dhore Sir.

The workshop was conducted by **Dr. Sunil Kokane sir** on the topic "**Immunodiagnosics & Immunodiagnosics**". Total 26 students were enrolled for the course. Questionnaire sessions were also conducted after the lecture. A total of 165 students have participated for the same and expressed the creativity in it. Vote of thanks was given by Ms. Deepthi Hynal ma'am. All the staffs of the organizing committee contributed for the success of the programme. Theory and Practical exam was conducted in offline mode having 50 M.C.Q. questions for theory exam were given while 50 marks practical exam was conducted. Internal assessment was done on the basis of regularity of students and visit to Mahatma Gandhi Institute for Rural Industrialization (MGIRI), Wardha on 04th November 2022.



Hon'ble Principal Sir felicitating the Resource person in Skill course workshop dt. 04/03/23



Poulhane
Dr. Pranita Gulhane



*On the Occasion of 125th Birth Year Celebration of
Dr. Panjabrao alias Bhausaheb Deshmukh,
Centenary Year Celebration of R.T.M. Nagpur University
& National Science Day*

**DEPARTMENT OF MICROBIOLOGY & BIOTECHNOLOGY,
SCIENCE COLLEGE, NAGPUR**

Organizes

Intercollegiate Workshop

On

Intellectual Learning Strategies & Skill Development

By

Dr. Sarita Mowade
Entrepreneur
SS Technovision & Ecosolutions
Nagpur

Dr. Sanjeev Patankar
National Coordinator
Microbiologists Society
India

Dr. Sunil Kokane
Product Specialist
HiMedia Laboratories Pvt. Ltd.
Mumbai

Participants: U.G./P.G. Science
Students

Venue: Conference Hall

Date: 04/03/2023
Time: 11.00 AM onwards

Registration Link:
<https://forms.gle/Ffk7vCkBSxodgTBF6>

Registration Fees: Rs. 200/-

Contact: 9096039162

Topics Covered

- Biofertilizers & Biopesticide Production Process
- Opportunities in Fruit Processing & Wine Technology
- Immunodiagnosics & Molecular Biology Techniques

Dr. Pranita Gulhane
Convener

Prof. Atul Bobdey
Coordinator

Prof. Mahendra Dhore
Chairman & Principal

Organizing Committee

Dr. Manpreet Kour

Ms. D. Deepthi Hynal

Ms. Madhuri Walvekar

Dr. Priya Fuke

Ms. Shivani Gohane

Ms. Sanchari Sarkar

Ms. Mayuri Bhad

Dr. Sapna Baghel



Join: <https://chat.whatsapp.com/Hri8Ufuwsx6Juw5t9EDwk3> Website: <http://www.sscnagpur.ac.in>

EDUCATIONAL TOUR REPORT OF BIOTECHNOLOGY FOR IMMUNOLOGY & IMMUNODIAGNOSTICS SKILL BASED COURSE

Visit of Skill based certificate course students was carried out at Mahatma Gandhi Institute for Rural Industrialization (MGIRI), Wardha on 04th November 2022. Internal assessment of those students was carried out on the basis of regularity of students and the Educational tour visit at MGIRI, Wardha. Many Skill based mini projects regarding manufacturing of herbal products, use of cotton fibres yarning for clothes -making, bamboo craft as well as hand on training of sophisticated laboratory equipment's. Total 67 students visited the same with great enthusiasm.



MGIRI, Wardha Visit by Skill course students dt. 04/11/22



Pruthi
Dr. Parvita Gullare

Rashtrasant Tukadoji Maharaj Nagpur University

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

Duration: 1hr

Name of Subject: Immunology and Immunodiagnostics

Max Marks: 50

Medium: English Marks Obtained:

Centre Name: Shri Shivaji Science College Congress Nagar, Nagpur

Date: 03/03/2023

Name of Student:

Year: B.Sc Group :

Note:

(1) Each question carries 2 marks

(2) No negative marking

-
- 1) 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
 - 2) Organ known as the 'graveyard of RBCs' is:
 - a) Liver
 - b) Spleen
 - c) Thymus
 - d) Kidney
 - 3) The 'administration of vaccines' falls under which type of adaptive immunity:
 - a) Natural active immunity
 - b) Artificial passive immunity
 - c) Natural passive immunity
 - d) Artificial active immunity
 - 4) Which of the following cells is responsible for humoral immunity?
 - a) NK cells
 - b) RBCs

- c) B cells
 - d) T cells
- 5) _____ Originates from myeloid progenitor of haematopoetic stem cells.
- a) Granulocytes
 - b) B cells
 - c) NK cells
 - d) T_C cells
- 6) The haematopoetic stem cells develops in which organ in adults:
- a) Pancreas
 - b) Liver
 - c) Bone marrow
 - d) Gall bladder
- 7) Cell mediated immunity involves which of the following cells?
- a) T cells
 - b) B cells
 - c) Mast cells
 - d) Basophils
- 8) The smallest unit of antigen that is capable of binding with antibodies is known as:
- a) Paratope
 - b) Epitope
 - c) Hapten
 - d) Adjuvant
- 9) The molecular weight of the compounds to be immunogenic must be
- a) <1000 Da
 - b) 3000 Da
 - c) 2000 Da
 - d) >6000 Da
- 10) The first myeloid cell to appear at the site of any injury is:
- a) B cells
 - b) T cells
 - c) Neutrophils
 - d) NK cells
- 11) The term 'Immunologic memory' is produced in which type of immunity?
- a) Innate immunity
 - b) Adaptive immunity
 - c) Both a & b
 - d) None of these
- 12) Which of the following property is essential for a substance to be antigenic?
- a) Foreign
 - b) Natural

- c) Less complex
 - d) None of these
- 13) Antibodies are secreted by:
- a) T cells
 - b) NK cells
 - c) Plasma cells
 - d) Monocytes
- 14) The area on the antibody molecule which combines with the epitope is known as:
- a) antigenic determinant
 - b) hapten
 - c) epitope
 - d) paratope
- 15) How many antigen binding regions are present on the tip of the surface of the antibody molecule?
- a) 2
 - b) 1
 - c) 4
 - d) 0
- 16) A blood protein produced in response to and counteracting a specific antigen is known as:
- a) Antibody
 - b) Antigen
 - c) Protein
 - d) Lipids
- 17) How many numbers of light chains (L) and heavy chains (H) are present in an antibody molecule?
- a) 3L and 3H
 - b) 4L and 4H
 - c) 1L and 2H
 - d) 2L and 2H
- 18) The two types of light chain present in an immunoglobulin are:
- a) α and β
 - b) μ and β
 - c) γ and β
 - d) κ and λ
- 19) The marker present on the surface of Tc cells is:
- a) CD16
 - b) CD27
 - c) CD8
 - d) CD4
- 20) The type of immunoglobulin which is present in tears, saliva, colostrum:

- a) IgD
 - b) IgE
 - c) IgA
 - d) IgM
- 21) Which one is NOT discovered by Robert Koch?
- a) *Bacillus anthracis*
 - b) *Mycobacterium tuberculosis*
 - c) *Salmonella typhi*
 - d) *Vibrio cholera*
- 22) A cook prepares snacks from 10 people going for a picnic. 08 out of them develop severe gastroenteritis within 4-6 hours of consumption of snacks. It is likely that on investigations cook is found to be carrier of:
- a) *Salmonella typhi*
 - b) *Vibrio cholera*
 - c) *E. coli*
 - d) *Staphylococcus aureus*
- 23) Endoflagellum is present in which class of bacteria?
- a) Spirilla
 - b) Spirochetes
 - c) Bacillus
 - d) Coccus
- 24) Which of the following is a spirochete?
- a) Gonococci
 - b) Treponema
 - c) Staphylococcus
 - d) Streptococcus
- 25) Spirochete bacteria move with the help of:
- a) Pseudopodia
 - b) Axial filament
 - c) Endoflagella
 - d) Both "B" and "C"



Pranita Gulkare
Dr. Pranita Gulkare
Dept. of Biotechnology
Science College, Nagpur-12.

Rashtrasant Tukadoji Maharaj Nagpur University

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

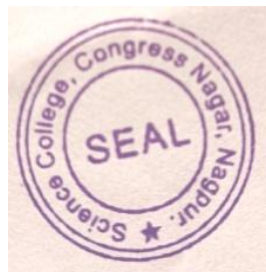
Name of Subject: Immunology and Immunodiagnostics

Centre Name: Shri Shivaji Science College Congress Nagar, Nagpur

Date: 03/03/2023

Answer key

- 1) a) Bone marrow
- 2) b) Spleen
- 3) d) Artificial active immunity
- 4) c) B cells
- 5) a) granulocytes
- 6) c) Bone marrow
- 7) a) T cells
- 8) b) Epitope
- 9) d) >6000 Da
- 10) c) Neutrophils
- 11) b) Adaptive immunity
- 12) a) Foreign
- 13) c) Plasma cells
- 14) d) Paratope
- 15) a) 2
- 16) a) Antibody
- 17) d) 2L and 2H
- 18) d) κ and λ
- 19) c) CD8
- 20) c) IgA
- 21) c) *Salmonella typhi*
- 22) d) *Staphylococcus aureus*
- 23) b) Spirochetes
- 24) b) Treponema
- 25) d) Both "B" and "C"



Dr. Pranita Gulkare
Dr. Pranita Gulkare
Dept. of Biotechnology
Science College, Nagpur-12.



Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

[Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1st of August, 1923 & presently a State University governed by Maharashtra Public Universities Act, 2016(Mah. Act No. VI of 2017)]

University Skill Development Centre
(under Board of Lifelong Learning and Extension)

Certificate

No. J.A.II-01

Shri/Smt./Ku. Adithya Kallattu is

awarded with Certificate on successful completion of the course titled

Immunology and Immunodiagnosics in

session 2022-23 under Jeevan Shikshan Abhiyan conducted for

45 hours from 06/09/2022 to 14/12/2022 by the Board of Lifelong

Learning & Extension in collaboration with Department of Botany,

S.S.E.S. Amt's Science College Congress Nagar, Nagpur, 440012.

He/She has passed the Examination with 0 Grade

Total Credits Earned : 01

Principal
SSES Amt's Science College
Congress Nagar, Nagpur-12

Course Co-ordinator
SSES Amt's Science College
Congress Nagar, Nagpur-12

Director
Board of Lifelong Learning
and Extension, RTMNU, Nagpur