

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

**UG Department of Microbiology
Skill Based Diploma Course: Fruit Processing & Wine Technology
Session 2021-2022
Course Coordinator Report**

Department of Microbiology, S.S.E.S. A's Science College, Congress Nagar, Nagpur organized has run the Skill based diploma course on "Fruit Processing & Wine Technology". A total of 32 students from the BSc First Year & 32 students from First Year Fruit Processing & Wine Technology were admitted to the course having theory as well as practical classes. A guest lectures on this course was conducted under the chairmanship of Officiating Principal Prof. M.P. Dhore, Skill based course College-Coordinator- Prof. Atul Bobdey and Skill Course Coordinator- Dr. Pranita Gulhane. The lecture was on Fruit processing, Wine technology & related topics. This skill course helps to develop skills for the efficient production of jam, jelly and wine. It also helps to inculcate learning and earning spirit among students. Moreover, by processing raw agricultural products, the food processing sector is able to increase their value, resulting in higher returns for farmers and rural communities, thereby contributing to the Prime Minister's vision of doubling farmers' income. Winemaking involves a wide range of microbiota that greatly influences the quality of wine and may cause negative attributes of some wines. Thus, the detection, identification, and characterization of the wine microbiome, including genera, species, strains, and metabolites involved, is of crucial importance. This course helps to carry out large-scale production of jam, jelly and wine for commercial use. After successful completion of the course, the examination was conducted by offline mode with Multiple Choice Question- Objective mode. Certificates of qualifying the exam were distributed to the exam qualified students.

Action Taken: A skill development course in Fruit Processing and Wine Technology is designed to equip participants with the knowledge and practical skills needed to work effectively in the fruit processing and winemaking industries.



Production of Wine from Red Grapes & Orange



Pranita Gulhane

Dr. Pranita Gulhane
Skill Based Course Coordinator

SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR
UG Department of Microbiology

NOTICE

Date: 10/12/2021

All the students are informed that **U.G. Department of Microbiology** runs **Skill Based Diploma on Course: Fruit Processing & Wine Technology** for the session 2021-22. Interested students of B.Sc. are requested to provide their names to the course Coordinator Dr. Pranita Gulhane or before 17/12/2021.



Dr. Pranita Gulhane
Skill Based Course Coordinator



U.G. DEPARTMENT OF MICROBIOLOGY, 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 Diploma Course for the Session 2021-22 on Fruit Processing & Wine Technology

Skill Based Diploma Course: Fruit Processing & Wine Technology

Course Co-Ordinator: Dr. Pranita Gulhane

Course Introduction

Fruit Processing & Wine Technology course offers an in-depth exploration of the techniques, technologies, and principle involved in fruit processing and wine production. Students will gain hands-on experience and theoretical knowledge essential for careers in these industries, focusing on the science and art behind creating high-quality fruit products and wines.

Course Objectives

1. To develop skill for the efficient production of Wine.
2. To inculcate learn and earn spirit among students about fruit processing.
3. To increase the survival rate of many communities for they solely depend on wine production.
4. To carry out large scale production of dietary supplements for direct consumption of processed fruits.
5. To develop awareness among people to increase the shelf life of perishable fruits.

Registration Date: 17/12/2021

Prof. Atul Bobdey
Coordinator
Dept. of Microbiology

Prof. Mahendra Dhore
Principal
Science College, Nagpur

Dr. Pranita Gulhane
Course- Coordinator
Skill Based Course

UG Department of Microbiology
Skill Based Diploma Course: Fruit Processing & Wine Technology

(Session 2021-2022)

Course Co-Ordinator: Dr. Pranita Gulhane

Course Introduction

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 4. To carry out large scale production of dietary supplements for direct consumption of processed fruits.
 5. To develop awareness among people to increase the shelf life of perishable fruits.
- **Instructional Strategies:** Theory class, Practical, Video clips, Models etc.
 - **Evaluation Strategies:** Oral discussions and Final MCQ examination

Course Outcomes:

By the end of this course, participants will be equipped with the comprehensive knowledge and practical skills needed to pursue careers in the fruit processing and winemaking sectors. They will be prepared to contribute effectively to production, quality control, research and development, and management roles within these dynamic industries.

Duration of course: Twenty weeks (60 Hours)



Dr. Pranita Gulhane
Skill Based Course Coordinator

Module: Skill Based Certificate Course- Fruit Processing and Wine Technology (Session 2021-2022)

The skill base diploma course syllabus for B.Sc. I, II and III appear students. Total 32 students were admitted for the course. Two-year diploma course in FRUIT PROCESSING AND WINE TECHNOLOGY. The examination of course shall comprise of two theory paper of three hours carries 40 marks each and two practical of one hour duration carries 30 marks. Internal assessment for the course based on one seminar 20 marks shall be conducted by university approved teachers, one project 20 marks and one field visit 20 marks. 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 Practical | Marks | | | | | Total marks |
|--|--|--------------|---------|-------------|---------|-----------|-------------|
| | | Theory | Seminar | Field Visit | Project | Practical | |
| Diploma course in Fruit processing and Wine technology | 1.Theory paper I & II Fruit processing and Wine technology | Paper I- 40 | | | | | 200 |
| | 2.Practicals based on course 3. Seminar 4. Field Visit 5. Project | Paper II- 40 | 20 | 20 | 20 | 60 | |
| Grand total | | | | | | | 200 |

*Internal assessment – Based on student’s attendance and performance during unit test exam and assignment/field work.



Dr. Pranita Gulhane
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.

SYLLABUS

THEORY DURATION – 02 Hrs per week
 60 Hrs per Session
 EXAMINATION HRS. - 03 Hrs
 MAX. MARKS 80

COURSE I – Wine Technology, Wine Production and Wine Microbiology

| CHAPTER | CONTENTS |
|------------------------------|---|
| | UNIT I |
| 1 <i>winery</i> | <p>Introduction and establishment of vineyard garden.</p> <ul style="list-style-type: none"> ✓ - Climatic requirement for grapes cultivation. ✓ Selection of soils, preparation of land ✓ vineyard layout. |
| 2 | <p>Propagation and practices in vineyard garden.</p> <ul style="list-style-type: none"> (Propagation techniques-single root method and root stock method.) ★ Nutritional requirement of grape wine, (optimum of PGR in propagation) |
| 3 <i>Plant protection</i> | <p>Plant protection</p> <ul style="list-style-type: none"> - Important diseases and pest of grapes. - Integrated pest management. |
| 4 | <p>Maturity indices preharvesting method and handling</p> <ul style="list-style-type: none"> - Maturity indices of Grape for wine industry. - Suitable methods of harvesting, precooling, grading, packing and transportation of grapes. - Methods of increasing sugar content in grapes. |
| 5 | <p>Shelf-life of fruits</p> <ul style="list-style-type: none"> - Criteria determining shelf-life of grapes. |

| CHAPTER | CONTENTS |
|---------|---|
| | UNIT II |
| 1 | <ul style="list-style-type: none"> ✓ Introduction to Wine Technology - Wine is a fermented product. - Wine history ("old" and "new" world wine). - Classification of Wine - Wine quality (vintage, Terroir). - Wine and health (resveratrol, French paradox). |
| 2 | <p>Transformation Grapes into Wine</p> <ul style="list-style-type: none"> - Grape maturity. - Pre-fermentation actions (enzymes, skin contact...) → Waghwan. - Artificial inoculation (yeast selection). - Alcoholic fermentation. → chandali. - Malolactic fermentation. → simran. |
| 3 | <p>Wine production flow charts :</p> <ul style="list-style-type: none"> - White wine. - Red wine. - Rosé wine. → lively - Sparkling wine. - Port and sherry wine. → Strong wine from southern Spain |
| 4 | <p>Wine fermentation technology</p> <ul style="list-style-type: none"> - Use of Sulphur-di-Oxide. (pH influence). → Udita |

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| CHAPTER | CONTENTS |
|----------|---|
| UNIT III | |
| 1 | Vintage and processing of grapes - Khasan, vintage & processing |
| 2 | Pre fermentation and white wine production - Khasan, Khan |
| 3 | Red wine-making - Ghanvra |
| 4 | Post fermentation measures - Sakshi |
| 5 | Post Fermentation process - Sakshi, Khasan |

| CHAPTER | CONTENTS | MARKS | HOURS |
|---------|--|------------------|-------|
| UNIT IV | | | |
| 1 | - Chemical nature, origin and consequences of the | → Srinde; Pranay | |
| 2 | Organoleptic defects | | |
| 3 | - The colloidal state and tartrate stability in wine → | | |
| 4 | - Clarification and Filtration process → Gohane | | |
| 5 | - Fining and fining agents → Sneha | | |
| | - Fining of wines → Khasan. | | |

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| CHAPTER | CONTENTS |
|---------|--|
| UNIT V | |
| 1 | Microbial spoilage |
| | - Diagnosis of spoilage |
| | - Identification of wine spoilage micro-organisms. |
| 2 | Oak and wine - G. D. A. F. H. D. , Aishwarya. |

Practical:

| | |
|---|--|
| 1 | Proximate composition of fruit juices: a) pH – by pH meter. b) Acidity – by titration. c) Moisture – Oven drying. d) Sugar – AOAC. |
| 2 | Preparation of soft drinks : a) Lemon water. b) Barley water (1) |
| 3 | Production of raisins from grapes (2) → Pg. No. 5 |
| 4 | Production of organic manures from pomace of fruit industry |
| 5 | Procedure for preparation of jelly from any two fruits (apple, orange, pineapple, mixed fruits, mango, papaya etc.) → (4) |
| 6 | Preparation of marmalade → (5) |
| 7 | Preparation of lemon syrup. → (3) Pg. No. 7 |
| 8 | Preservation of apple juice. → (6) |

Note

| | |
|---|---|
| 1 | A visit to the winery: Report submission |
| 2 | Seminar on wine microbiology (20) min / student |

Practicals:

| | |
|---|--|
| 1 | Determination of reducing sugar by Lane and Eynon method → (10) |
| 2 | Determination of carbon-di-oxide by titrimetric method → (8) |
| 3 | Alcohol estimation in wine → (9) |
| 4 | Protein stability : Heat test |
| 5 | Microscopic observation of yeast present in wine. Starter yeast and Specific staining techniques for dead and alive cells. (7) |
| 6 | Identification of lactic acid bacteria by biochemical methods. → (11) |
| 7 | Identification of acetic acid bacteria by biochemical method. → (12) |
| 8 | Isolation of spoilage micro organism from wine sample. |



Pranita Gulhane

Dr. Pranita Gulhane
Skill Based Course Coordinator

**Teaching Plan: Skill Based Diploma Course- Fruit Processing & Wine
Technology
(Duration- 60 hours) (Session 2021-22)**

I Year

| Weeks | Day | Content |
|--|-----------|---|
| Theory | | |
| Paper I: Wine Technology, Wine Production & Wine Microbiology | | |
| 1 | 1.1 (01) | Introduction and establishment of vineyard garden |
| | 1.2 (02) | Climatic requirement for grapes cultivation |
| | 1.3 (02) | Selection of Soils, Preparation of land and vineyard layout |
| 2 | 1.4 (03) | Propagation and practices in vineyard garden |
| | 1.5 (03) | Propagation techniques- single root method and root stock method |
| | 1.6 (04) | Nutritional requirement of grape wine, optimum of PGR in propagation |
| 3 | 1.7 (05) | Plant protection |
| | 1.8 (06) | Important diseases and pest of grapes |
| | 1.9 (06) | Integrated pest management |
| 4 | 1.10 (07) | Maturity indices Pre-harvesting method and handling |
| | 1.11(08) | Suitable methods of harvesting, precooling, grading, packing and transportation of grapes |
| | 1.12 (08) | Methods of increasing sugar content in grapes |
| 5 | 1.13 (09) | Shelf-life of fruits |
| | 2.1 (10) | Introduction of Wine Technology |
| 6 | 2.2 (11) | Classification of Wine |
| | 2.3 (12) | Transformation of grapes into wine |
| 7 | 2.4 (13) | Wine fermentation technology |
| | 2.5 (13) | Pre-fermentation actions |
| | 2.6 (14) | Wine production flow charts |
| | 2.7 (14) | White wine |
| | 2.8 (14) | Red wine |
| 8 | 2.9 (15) | Rose wine |
| | 2.10 (16) | Sparkling wine |
| | 2.11 (16) | Port and Sherry Wine |
| Paper II: Fruit Processing | | |
| 9 | 1.1 (17) | Fruit juices, squashes and cordials |
| | 1.2 (17) | Fruit juice: Preservation and carbonation |

| | | |
|----------------------------|----------|--|
| | 1.3 (18) | Layout plan of a pomegranate juice plant |
| | 1.4 (18) | Fruit beverages: preparation and preservation |
| 10 | 1.1 (19) | Staining, filtration and clarification |
| | 1.2 (20) | Fruit juice: Preservation and carbonation |
| 11 | 2.1 (21) | Citrus fruit juices |
| | 2.2 (21) | Scenario of citrus production in India |
| | 2.3 (22) | Various products from citrus fruits. Shelf-life monitoring of citrus juice |
| | 2.4 (22) | Carbonated beverages from citrus |
| 12 | 2.5 (23) | Citrus by-products: manufacture of citric acid, orange oil, marmalades, vinegar, pectin etc. |
| | 3.1 (23) | Evaluation of banana for various product |
| | 3.2 (24) | Composition of banana fruit and its nutritive value |
| 13 | 3.3 (25) | Extraction of protein from banana leaves |
| | 3.4 (25) | Cattle feed from banana fruits |
| | 3.5 (26) | Utilization of juice of banana plant for energy production |
| | 3.6 (26) | Production of fiber from pseudo-stem of banana |
| Practical: Paper I | | |
| 14 | 1 (27) | Proximate composition of fruit juices: a) pH- by pH meter. b) Acidity- by titration c) Moisture- oven drying. d) Sugar- AOAC |
| | 2 (27) | Preparation of soft drinks: a) Lemon water b) Barley water |
| | 3 (28) | Production of raisins from grapes. |
| | 4 (28) | Production of organic manures from pomace of fruit industry |
| Practical: Paper II | | |
| 15 | 5 (29) | Determination of Reducing Sugar by lane and eynone method |
| | 6 (29) | Determination of carbon dioxide by titrimetric method |
| | 7 (30) | Alcohol estimation in wine |
| | 8 (30) | Protein stability: Heat test |



Pranita Gulhane

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Skill Based Course Coordinator

**Teaching Plan: Skill Based Diploma Course- Fruit Processing & Wine
Technology**

(Duration- 60 hours) (Session 2021-22)

II Year

| Weeks | Day | Content |
|--|------------|--|
| Theory | | |
| Paper I: Wine Technology, Wine Production & Wine Microbiology | | |
| 1 | 3.1 (01) | Vintage and processing of grapes |
| | 3.2 (02) | Pre fermentation and white wine production |
| 2 | 3.3 (03) | Red wine making |
| | 3.4 (04) | Post fermentation measures |
| | 3.5(04) | Post fermentation process |
| 3 | 4.1 (05) | Chemical nature origin and consequences of the organoleptic defects |
| | 4.2 (06) | The colloidal state and tartarate stability in wine |
| 4 | 4.3 (07) | Clarification and filtration process |
| 5 | 4.4 (08) | Fining and fining agents |
| | 4.5 (09) | Fining of wines |
| 6 | 5.1 (10) | Microbial spoilage |
| | 5.2 (11) | Diagnosis of spoilage |
| 7 | 5.3 (12) | Identification of wine spoilage microorganisms |
| | 5.4 (13) | Oak and Wine |
| Paper II – Fruit Processing | | |
| 8 | 4.1 (14) | Techniques used in the preparation of Starter Culture of Yeast |
| | 4.2 (15) | Management and control of the first and second alcoholic fermentation |
| 9 | 4.3 (16) | Use of fermentation activators and ammoniacal nitrogen and control of fermentation temperature |
| | 4.4 (17) | Sluggish and stuck alcoholic fermentation their rectification |
| 10 | 4.5 (18) | Evidence for the existence of interactions between wine and yeast |
| | 5.1 (19) | Production of pectin from citrus peel |
| 11 | 5.2 (20) | Production of citric acid from citrus fruit |
| | 5.3 (21) | Production of jam from papaya or pine apple or mango |
| 12 | 5.4 (22) | Orange oils citrus fruit |

| | | |
|----------------------------|----------|--|
| | 5.5 (23) | Production of vinegar from fruits |
| Practical: Paper I | | |
| 13 | 5 (24) | Microscopic Observation of yeast present in wine. Starter yeast and specific staining techniques for dead and alive cells |
| | 6 (25) | Isolation of spoilage microorganism from wine sample |
| 14 | 7 (26) | Identification of lactic acid bacteria by biochemical methods |
| | 8 (27) | Identification of acetic acid bacteria by biochemical methods |
| Practical: Paper II | | |
| 15 | 5 (28) | Procedure for preparation of jelly from any two fruits (apple, orange, pineapple, mixed fruits, mango, papaya etc. |
| | 6 (29) | Preparation of marmalade |
| | 7 (30) | Preparation of lemon syrup |
| | 8 (30) | Preservation of apple juice |

UG Department of Microbiology
Skill Based Diploma Course- Fruit Processing & Wine Technology
Time Table

w.e.f. 17/12/2021

| Day | Theory |
|------------|--------------------------------|
| Mon & Tue | Theory 9.00 PM 10.00 PM |
| Wed & Thu | Theory 9.00 PM 10.00 PM |
| Fri & Sat | Practical, 10.00 PM – 12.00 PM |



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UG Department of Microbiology

EXAMINATION NOTICE

Date: 16/02/2022

All the students enrolled for **Skill Based Course: Fruit Processing & Wine Technology** for the session 2021-22 Second Year are informed that dates of Theory and Practical Exam are mentioned in the table given below at 10:30 – 11:30AM for Theory Exam and at 12:30 PM – 5:30 PM for Practical Exam.

| Sr. No. | Class | Theory Paper I | Theory Paper II | Practical |
|----------------|--------------|---------------------------|----------------------------|------------------|
| 1. | Second Year | 21/02/2022 | 22/02/2022 | 13/11/2019 |



Dr. Pranita Gulhane
Skill Based Course Coordinator

ATTENDANCE SHEET (2021-22)

S.S.E.S.A's Science College, Congress Nagar, Nagpur

Second Year Diploma in Skill Course Fruit processing & Wine Technology

Class: Fruit Processing & Wine Technology

Theory/ Practical: Paper-I

Month: Dec to Feb

Name of Lecturer:

Dr. Pranita Gulhane

| Sr. No | Name of Student | 20/2/21 | 21/2/21 | 22/2/21 | 23/2/21 | 24/2/21 | 25/2/21 | 26/2/21 | 27/2/21 | 28/2/21 | 29/2/21 | 30/2/21 | 31/2/21 | 1/3/21 | 2/3/21 | 3/3/21 | 4/3/21 | 5/3/21 | 6/3/21 | 7/3/21 | 8/3/21 | 9/3/21 | 10/3/21 | 11/3/21 | 12/3/21 | 13/3/21 | 14/3/21 | 15/3/21 | 16/3/21 | 17/3/21 | 18/3/21 | 19/3/21 | 20/3/21 | 21/3/21 | 22/3/21 | 23/3/21 | 24/3/21 | 25/3/21 | 26/3/21 | 27/3/21 | 28/3/21 | 29/3/21 | 30/3/21 | 31/3/21 | 1/4/21 | 2/4/21 | 3/4/21 | 4/4/21 | 5/4/21 | 6/4/21 | 7/4/21 | 8/4/21 | 9/4/21 | 10/4/21 | 11/4/21 | 12/4/21 | 13/4/21 | 14/4/21 | 15/4/21 | 16/4/21 | 17/4/21 | 18/4/21 | 19/4/21 | 20/4/21 | 21/4/21 | 22/4/21 | 23/4/21 | 24/4/21 | 25/4/21 | 26/4/21 | 27/4/21 | 28/4/21 | 29/4/21 | 30/4/21 | 1/5/21 | 2/5/21 | 3/5/21 | 4/5/21 | 5/5/21 | 6/5/21 | 7/5/21 | 8/5/21 | 9/5/21 | 10/5/21 | 11/5/21 | 12/5/21 | 13/5/21 | 14/5/21 | 15/5/21 | 16/5/21 | 17/5/21 | 18/5/21 | 19/5/21 | 20/5/21 | 21/5/21 | 22/5/21 | 23/5/21 | 24/5/21 | 25/5/21 | 26/5/21 | 27/5/21 | 28/5/21 | 29/5/21 | 30/5/21 | 31/5/21 | 1/6/21 | 2/6/21 | 3/6/21 | 4/6/21 | 5/6/21 | 6/6/21 | 7/6/21 | 8/6/21 | 9/6/21 | 10/6/21 | 11/6/21 | 12/6/21 | 13/6/21 | 14/6/21 | 15/6/21 | 16/6/21 | 17/6/21 | 18/6/21 | 19/6/21 | 20/6/21 | 21/6/21 | 22/6/21 | 23/6/21 | 24/6/21 | 25/6/21 | 26/6/21 | 27/6/21 | 28/6/21 | 29/6/21 | 30/6/21 | 1/7/21 | 2/7/21 | 3/7/21 | 4/7/21 | 5/7/21 | 6/7/21 | 7/7/21 | 8/7/21 | 9/7/21 | 10/7/21 | 11/7/21 | 12/7/21 | 13/7/21 | 14/7/21 | 15/7/21 | 16/7/21 | 17/7/21 | 18/7/21 | 19/7/21 | 20/7/21 | 21/7/21 | 22/7/21 | 23/7/21 | 24/7/21 | 25/7/21 | 26/7/21 | 27/7/21 | 28/7/21 | 29/7/21 | 30/7/21 | 31/7/21 | 1/8/21 | 2/8/21 | 3/8/21 | 4/8/21 | 5/8/21 | 6/8/21 | 7/8/21 | 8/8/21 | 9/8/21 | 10/8/21 | 11/8/21 | 12/8/21 | 13/8/21 | 14/8/21 | 15/8/21 | 16/8/21 | 17/8/21 | 18/8/21 | 19/8/21 | 20/8/21 | 21/8/21 | 22/8/21 | 23/8/21 | 24/8/21 | 25/8/21 | 26/8/21 | 27/8/21 | 28/8/21 | 29/8/21 | 30/8/21 | 31/8/21 | 1/9/21 | 2/9/21 | 3/9/21 | 4/9/21 | 5/9/21 | 6/9/21 | 7/9/21 | 8/9/21 | 9/9/21 | 10/9/21 | 11/9/21 | 12/9/21 | 13/9/21 | 14/9/21 | 15/9/21 | 16/9/21 | 17/9/21 | 18/9/21 | 19/9/21 | 20/9/21 | 21/9/21 | 22/9/21 | 23/9/21 | 24/9/21 | 25/9/21 | 26/9/21 | 27/9/21 | 28/9/21 | 29/9/21 | 30/9/21 | 1/10/21 | 2/10/21 | 3/10/21 | 4/10/21 | 5/10/21 | 6/10/21 | 7/10/21 | 8/10/21 | 9/10/21 | 10/10/21 | 11/10/21 | 12/10/21 | 13/10/21 | 14/10/21 | 15/10/21 | 16/10/21 | 17/10/21 | 18/10/21 | 19/10/21 | 20/10/21 | 21/10/21 | 22/10/21 | 23/10/21 | 24/10/21 | 25/10/21 | 26/10/21 | 27/10/21 | 28/10/21 | 29/10/21 | 30/10/21 | 31/10/21 | 1/11/21 | 2/11/21 | 3/11/21 | 4/11/21 | 5/11/21 | 6/11/21 | 7/11/21 | 8/11/21 | 9/11/21 | 10/11/21 | 11/11/21 | 12/11/21 | 13/11/21 | 14/11/21 | 15/11/21 | 16/11/21 | 17/11/21 | 18/11/21 | 19/11/21 | 20/11/21 | 21/11/21 | 22/11/21 | 23/11/21 | 24/11/21 | 25/11/21 | 26/11/21 | 27/11/21 | 28/11/21 | 29/11/21 | 30/11/21 | 1/12/21 | 2/12/21 | 3/12/21 | 4/12/21 | 5/12/21 | 6/12/21 | 7/12/21 | 8/12/21 | 9/12/21 | 10/12/21 | 11/12/21 | 12/12/21 | 13/12/21 | 14/12/21 | 15/12/21 | 16/12/21 | 17/12/21 | 18/12/21 | 19/12/21 | 20/12/21 | 21/12/21 | 22/12/21 | 23/12/21 | 24/12/21 | 25/12/21 | 26/12/21 | 27/12/21 | 28/12/21 | 29/12/21 | 30/12/21 | 31/12/21 | 1/1/22 | 2/1/22 | 3/1/22 | 4/1/22 | 5/1/22 | 6/1/22 | 7/1/22 | 8/1/22 | 9/1/22 | 10/1/22 | 11/1/22 | 12/1/22 | 13/1/22 | 14/1/22 | 15/1/22 | 16/1/22 | 17/1/22 | 18/1/22 | 19/1/22 | 20/1/22 | 21/1/22 | 22/1/22 | 23/1/22 | 24/1/22 | 25/1/22 | 26/1/22 | 27/1/22 | 28/1/22 | 29/1/22 | 30/1/22 | 31/1/22 | 1/2/22 | 2/2/22 | 3/2/22 | 4/2/22 | 5/2/22 | 6/2/22 | 7/2/22 | 8/2/22 | 9/2/22 | 10/2/22 | 11/2/22 | 12/2/22 | 13/2/22 | 14/2/22 | 15/2/22 | 16/2/22 | 17/2/22 | 18/2/22 | 19/2/22 | 20/2/22 | 21/2/22 | 22/2/22 | 23/2/22 | 24/2/22 | 25/2/22 | 26/2/22 | 27/2/22 | 28/2/22 | 29/2/22 | 30/2/22 | 31/2/22 | 1/3/22 | 2/3/22 | 3/3/22 | 4/3/22 | 5/3/22 | 6/3/22 | 7/3/22 | 8/3/22 | 9/3/22 | 10/3/22 | 11/3/22 | 12/3/22 | 13/3/22 | 14/3/22 | 15/3/22 | 16/3/22 | 17/3/22 | 18/3/22 | 19/3/22 | 20/3/22 | 21/3/22 | 22/3/22 | 23/3/22 | 24/3/22 | 25/3/22 | 26/3/22 | 27/3/22 | 28/3/22 | 29/3/22 | 30/3/22 | 31/3/22 | 1/4/22 | 2/4/22 | 3/4/22 | 4/4/22 | 5/4/22 | 6/4/22 | 7/4/22 | 8/4/22 | 9/4/22 | 10/4/22 | 11/4/22 | 12/4/22 | 13/4/22 | 14/4/22 | 15/4/22 | 16/4/22 | 17/4/22 | 18/4/22 | 19/4/22 | 20/4/22 | 21/4/22 | 22/4/22 | 23/4/22 | 24/4/22 | 25/4/22 | 26/4/22 | 27/4/22 | 28/4/22 | 29/4/22 | 30/4/22 | 31/4/22 | 1/5/22 | 2/5/22 | 3/5/22 | 4/5/22 | 5/5/22 | 6/5/22 | 7/5/22 | 8/5/22 | 9/5/22 | 10/5/22 | 11/5/22 | 12/5/22 | 13/5/22 | 14/5/22 | 15/5/22 | 16/5/22 | 17/5/22 | 18/5/22 | 19/5/22 | 20/5/22 | 21/5/22 | 22/5/22 | 23/5/22 | 24/5/22 | 25/5/22 | 26/5/22 | 27/5/22 | 28/5/22 | 29/5/22 | 30/5/22 | 31/5/22 | 1/6/22 | 2/6/22 | 3/6/22 | 4/6/22 | 5/6/22 | 6/6/22 | 7/6/22 | 8/6/22 | 9/6/22 | 10/6/22 | 11/6/22 | 12/6/22 | 13/6/22 | 14/6/22 | 15/6/22 | 16/6/22 | 17/6/22 | 18/6/22 | 19/6/22 | 20/6/22 | 21/6/22 | 22/6/22 | 23/6/22 | 24/6/22 | 25/6/22 | 26/6/22 | 27/6/22 | 28/6/22 | 29/6/22 | 30/6/22 | 31/6/22 | 1/7/22 | 2/7/22 | 3/7/22 | 4/7/22 | 5/7/22 | 6/7/22 | 7/7/22 | 8/7/22 | 9/7/22 | 10/7/22 | 11/7/22 | 12/7/22 | 13/7/22 | 14/7/22 | 15/7/22 | 16/7/22 | 17/7/22 | 18/7/22 | 19/7/22 | 20/7/22 | 21/7/22 | 22/7/22 | 23/7/22 | 24/7/22 | 25/7/22 | 26/7/22 | 27/7/22 | 28/7/22 | 29/7/22 | 30/7/22 | 31/7/22 | 1/8/22 | 2/8/22 | 3/8/22 | 4/8/22 | 5/8/22 | 6/8/22 | 7/8/22 | 8/8/22 | 9/8/22 | 10/8/22 | 11/8/22 | 12/8/22 | 13/8/22 | 14/8/22 | 15/8/22 | 16/8/22 | 17/8/22 | 18/8/22 | 19/8/22 | 20/8/22 | 21/8/22 | 22/8/22 | 23/8/22 | 24/8/22 | 25/8/22 | 26/8/22 | 27/8/22 | 28/8/22 | 29/8/22 | 30/8/22 | 31/8/22 | 1/9/22 | 2/9/22 | 3/9/22 | 4/9/22 | 5/9/22 | 6/9/22 | 7/9/22 | 8/9/22 | 9/9/22 | 10/9/22 | 11/9/22 | 12/9/22 | 13/9/22 | 14/9/22 | 15/9/22 | 16/9/22 | 17/9/22 | 18/9/22 | 19/9/22 | 20/9/22 | 21/9/22 | 22/9/22 | 23/9/22 | 24/9/22 | 25/9/22 | 26/9/22 | 27/9/22 | 28/9/22 | 29/9/22 | 30/9/22 | 31/9/22 | 1/10/22 | 2/10/22 | 3/10/22 | 4/10/22 | 5/10/22 | 6/10/22 | 7/10/22 | 8/10/22 | 9/10/22 | 10/10/22 | 11/10/22 | 12/10/22 | 13/10/22 | 14/10/22 | 15/10/22 | 16/10/22 | 17/10/22 | 18/10/22 | 19/10/22 | 20/10/22 | 21/10/22 | 22/10/22 | 23/10/22 | 24/10/22 | 25/10/22 | 26/10/22 | 27/10/22 | 28/10/22 | 29/10/22 | 30/10/22 | 31/10/22 | 1/11/22 | 2/11/22 | 3/11/22 | 4/11/22 | 5/11/22 | 6/11/22 | 7/11/22 | 8/11/22 | 9/11/22 | 10/11/22 | 11/11/22 | 12/11/22 | 13/11/22 | 14/11/22 | 15/11/22 | 16/11/22 | 17/11/22 | 18/11/22 | 19/11/22 | 20/11/22 | 21/11/22 | 22/11/22 | 23/11/22 | 24/11/22 | 25/11/22 | 26/11/22 | 27/11/22 | 28/11/22 | 29/11/22 | 30/11/22 | 31/11/22 | 1/12/22 | 2/12/22 | 3/12/22 | 4/12/22 | 5/12/22 | 6/12/22 | 7/12/22 | 8/12/22 | 9/12/22 | 10/12/22 | 11/12/22 | 12/12/22 | 13/12/22 | 14/12/22 | 15/12/22 | 16/12/22 | 17/12/22 | 18/12/22 | 19/12/22 | 20/12/22 | 21/12/22 | 22/12/22 | 23/12/22 | 24/12/22 | 25/12/22 | 26/12/22 | 27/12/22 | 28/12/22 | 29/12/22 | 30/12/22 | 31/12/22 | 1/1/23 | 2/1/23 | 3/1/23 | 4/1/23 | 5/1/23 | 6/1/23 | 7/1/23 | 8/1/23 | 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| 19/4/23 | 20/4/23 | 21/4/23 | 22/4/23 | 23/4/23 | 24/4/23 | 25/4/23 | 26/4/23 | 27/4/23 | 28/4/23 | 29/4/23 | 30/4/23 | 31/4/23 | 1/5/23 | 2/5/23 | 3/5/23 | 4/5/23 | 5/5/23 | 6/5/23 | 7/5/23 | 8/5/23 | 9/5/23 | 10/5/23 | 11/5/23 | 12/5/23 | 13/5/23 | 14/5/23 | 15/5/23 | 16/5/23 | 17/5/23 | 18/5/23 | 19/5/23 | 20/5/23 | 21/5/23 | 22/5/23 | 23/5/23 | 24/5/23 | 25/5/23 | 26/5/23 | 27/5/23 | 28/5/23 | 29/5/23 | 30/5/23 | 31/5/23 | 1/6/23 | 2/6/23 | 3/6/23 | 4/6/23 | 5/6/23 | 6/6/23 | 7/6/23 | 8/6/23 | 9/6/23 | 10/6/23 | 11/6/23 | 12/6/23 | 13/6/23 | 14/6/23 | 15/6/23 | 16/6/23 | 17/6/23 | 18/6/23 | 19/6/23 | 20/6/23 | 21/6/23 | 22/6/23 | 23/6/23 | 24/6/23 | 25/6/23 | 26/6/23 | 27/6/23 | 28/6/23 | 29/6/23 | 30/6/23 | 31/6/23 | 1/7/23 | 2/7/23 | 3/7/23 | 4/7/23 | 5/7/23 | 6/7/23 | 7/7/23 | 8/7/23 | 9/7/23 | 10/7/23 | 11/7/23 | 12/7/23 | 13/7/23 | 14/7/23 | 15/7/23 | 16/7/23 | 17/7/23 | 18/7/23 | 19/7/23 | 20/7/23 | 21/7/23 | 22/7/23 | 23/7/23 | 24/7/23 | 25/7/23 | 26/7/23 | 27/7/23 | 28/7/23 | 29/7/23 | 30/7/23 | 31/7/23 | 1/8/23 | 2/8/23 | 3/8/23 | 4/8/23 | 5/8/23 | 6/8/23 | 7/8/23 | 8/8/23 | 9/8/23 | 10/8/23 | 11/8/23 | 12/8/23 | 13/8/23 | 14/8/23 | 15/8/23 | 16/8/23 | 17/8/23 | 18/8/23 | 19/8/23 | 20/8/23 | 21/8/23 | 22/8/23 | 23/8/23 | 24/8/23 | 25/8/23 | 26/8/23 | 27/8/23 | 28/8/23 | 29/8/23 | 30/8/23 | 31/8/23 | 1/9/23 | 2/9/23 | 3/9/23 | 4/9/23 | 5/9/23 | 6/9/23 | 7/9/23 | 8/9/23 | 9/9/23 | 10/9/23 | 11/9/23 | 12/9/23 | 13/9/23 | 14/9/23 | 15/9/23 | 16/9/23 | 17/9/23 | 18/9/23 | 19/9/23 | 20/9/23 | 21/9/23 | 22/9/23 | 23/9/23 | 24/9/23 | 25/9/23 | 26/9/23 | 27/9/23 | 28/9/23 | 29/9/23 | 30/9/23 | 31/9/23 | 1/10/23 | 2/10/23 | 3/10/23 | 4/10/23 | 5/10/23 | 6/10/23 | 7/10/23 | 8/10/23 | 9/10/23 | 10/10/23 | 11/10/23 | 12/10/23 | 13/10/23 | 14/10/23 | 15/10/23 | 16/10/23 | 17/10/23 | 18/10/23 | 19/10/23 | 20/10/23 | 21/10/23 | 22/10/23 | 23/10/23 | 24/10/23 | 25/10/23 | 26/10/23 | 27/10/23 | 28/10/23 | 29/10/23 | 30/10/23 | 31/10/23</ |
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Rashtrasant Tukadoji Maharaj Nagpur University

Exam Name: Skill based Diploma Course Second Year Examination, Summer- 2021-22

Name of Subject: Fruit Processing & Wine Technology

Medium: English

Paper: I

Marks Obtained:

Centre Name: Science College Congress Nagar, Nagpur

Name of Student:

Class:

Group:

Duration: 1hr

Max Marks: 40

Note:

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

1. Landscape architecture is now recognized by international bodies namely

- a) International labor organization.
- b) International federation of landscape architects (IFLA)
- c) ASLA- American society of landscape architecture
- d) All the above

Ans: d) All the above

1. provides color to the building, and it helps to provides the balance in the height of the building visually

- a) Landscaping
- b) Horticulture
- c) Sericulture
- d) Pesiculture

Ans: b) Horticulture

2. Regular soil is most suitable for the cultivations of

- a) Groundnut
- b) Cotton
- c) Tobacco
- d) None of the above

Ans: b) Cotton

3. Which of the following food items can be used as natural food preservatives?

- a) Venegar, ginger, apple and banana.
- b) Garlic, lemon, sugar and vinegar.
- c) Garlic, apple , salt and tamarind.
- d) Ginger, garlic, banana and tamarid.

Ans: b) Garlic,lemon, sugar and vinegar.

4. Which crop have the natural dormancy period.
- a) Bulb crops
 - b) Roots crops
 - c) Tuber crops
 - d) All the above

Ans: d) All the above

- 6 The fruits which are harvested by hand
- a) Apple
 - b) Citrus
 - c) Tomato
 - d) All the above

Ans: d) All the above

7. Principle method to dehydrate coffee beans extract.

- a) Tunnel drying
- b) Drum drying
- c) Spray drying
- d) None of above

Ans: c) Spray drying

8. Ripening of fruit requires.

- a) Hormone
- b) Enzymes
- c) Co₂
- d) Oxygen

Ans: b) Enzymes

9. CA storage stands for.
- a) Controlled atmosphere
 - b) Centrally air conditioned
 - c) Completely air conditioned
 - d) None of the above

Ans: a) Controlled atmosphere

10 In soft drink flavor is stable to which temperature.

- a) 20 o C
- b) 38 o C
- c) 45 o C
- d) 54 o C

Ans: b) 38 o C

11. What is the form of membrane lipids in fruits and vegetable that are resistant to chilling.

- a) Semifluid
- b) Fluid
- c) Rigid
- d) Solid

Ans: a) Semifluid

12. The pH of fruits tissue is generally

- a) <5
- b) >5
- c) >7
- d) Neutral

Ans: a) <5

13. Which organic acid present in apple.

- a) Malic acid
- b) Citric acid
- c) Tartaric acid
- d) Benzoic acid

Ans: a) Malic acid

14. Fresh fruits and vegetable an apple orange and carrots, keep best at temperature.

- a) Below freezing
- b) Above freezing
- c) At freezing
- d) 20o

Ans: b) Above freezing

15. Carrots are rich in ...

- a) Vitamin B
- b) Vitamin C
- c) Vitamin A
- d) Vitamin D

Ans: c) Vitamin A

16. What is the citrus fruit production in India?

- a) 14million tonnes
- b) 24 million tonnes
- c) 34 million tonnes
- d) 44 million tonnes

Ans: a) 14million tonnes

17. Which of the following citrus fruits are most commonly grown in India?

- a) Mandarin
- b) Lime
- c) Lemon
- d) Grapefruit

Ans: a) Mandarin

18. Which citrus fruit is used to make the drink Limca?

- a) Lime
- b) Lemon
- c) Mandarin
- d) Both a & b

Ans: d) Both a & b

19. Which citrus fruit is used to make the citrus by-product Pectin?

- a) Grapefruit
- b) Lemon
- c) Lime
- d) Both a & b

Ans: d) Both a & b

20. What is the largest citrus fruit producing State in India?

- a) Maharashtra
- b) Tamil Nadu
- c) Karnataka
- d) West Bengal

Ans: a) Maharashtra



Pranita Gulhane

Dr. Pranita Gulhane
Skill Based Course Coordinator

Rashtrasant Tukadoji Maharaj Nagpur University

Exam Name: Skill based Diploma Course Second Year Examination, Summer- 2021-22

Name of Subject: Fruit Processing & Wine Technology

Medium: English

Paper: II

Marks Obtained:

Centre Name: Science College Congress Nagar, Nagpur

Name of Student:

Class:

Group:

Duration: 1hr

Max Marks: 40

Note:

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

1. Which of the following is NOT a citrus fruit?

- a) Mandarin
- b) Kumquat
- c) Pomelo
- d) Persimmon

Ans: d) Persimmon

2. Which is the largest citrus by-product industry in India?

- a) Citrus fiber
- b) Citric acid
- c) Orange peel oil
- d) Orange pomace

Ans: b) Citric acid

3. Which of the following is not a by-product of citrus fruits?

- a) Citric acid
- b) Orange pomace
- c) Orange peel oil
- d) Citron

Ans: d) Citron

4. Which of the following substances is found in high quantities in banana fruit?

- a) Carotene
- b) Fructose

c) Vitamins

d) Minerals

Ans: b) Fructose

5. What is the process of concentrating citrus fruit pulp called?

a) Fermentation

b) Distillation

c) Pressurization

d) Carbonation

Ans: b) Distillation

6. Which of the following temperature ranges is ideal for grape cultivation?

a) 0-10°C

b) 15-25°C

c) 30-35°C

d) 40-50°C

Ans: b) 15-25°C

7. What is the minimum annual rainfall required for grape cultivation?

a) 100-200 mm

b) 300-500 mm

c) 600-800 mm

d) 1000-1200 mm

Ans: c) 600-800 mm

8. Which climate condition is most suitable for grapevine growth?

a) Arid

b) Tropical

c) Temperate

d) Polar

Ans: c) Temperate

9. Which of the following is NOT a climatic requirement for successful grape cultivation?

a) High humidity

b) Well-drained soil

c) Long hours of sunlight

d) Frequent frost

Ans: a) High humidity

10. Which season is crucial for grapevine flowering and fruit set?

- a) Winter
- b) Spring
- c) Summer
- d) Autumn

Ans: b) Spring

11. Which factor is essential for grape ripening and sugar accumulation?

- a) Low temperature**
- b) High humidity
- c) Short days
- d) Excessive rainfall

Ans: a) Low temperature

12. Which climatic factor affects grape flavor and aroma development?

- a) High humidity
- b) Long daylight hours
- c) Cool nights
- d) Strong winds

Ans: c) Cool nights

13. Which soil type is most suitable for vineyard establishment?

- a) Clay
- b) Sandy
- c) Loamy
- d) Peaty

Ans: c) Loamy

14. What is the ideal pH range for soil in a vineyard?

- a) pH 3-4
- b) pH 5-6

- c) pH 7-8
- d) pH 9-10

Ans: b) pH 5-6

15. Which of the following soil characteristics is NOT desirable for grape cultivation?

- a) Good drainage
- b) High organic matter content
- c) High salinity
- d) Deep root penetration

Ans: c) High salinity

16. What is the primary purpose of soil preparation in a vineyard?

- a) Increase soil compaction
- b) Reduce soil fertility
- c) Improve soil structure
- d) Encourage soil erosion

Ans: c) Improve soil structure

17. Which fungal disease commonly affects grapevines, causing brown lesions on leaves and fruit, and is often controlled using sulphur sprays?

- a) Downy mildew
- b) Powdery mildew
- c) Anthracnose
- d) Botrytis bunch rot

Ans: b) Powdery mildew

18. What is the primary method for controlling downy mildew in grapevines?

- a) Copper sprays
- b) Sulfur sprays
- c) Neem oil application
- d) Synthetic pesticides

Ans: a) Copper sprays

19. Which insect pest causes damage to grape leaves by skeletonizing them and can be controlled using *Bacillus thuringiensis* (Bt)?

a) *Grape phylloxera*

b) *Grape leafhopper*

c) *Grapevine moth*

d) *Grape berry moth*

Ans: b) *Grape leafhopper*

20. Which bacterial disease affects grapevines, causing yellowing and wilting of leaves, and is commonly managed through pruning and removing infected plant material?

a) Pierce's disease

b) Crown gall

c) Bacterial leaf scorch

d) Red rot

Ans: a) Pierce's disease



Dr. Pranita Gulhane
Skill Based Course Coordinator



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U.G. DEPARTMENT OF MICROBIOLOGY

Skill-Based Course

Course Exam Name: Fruit Processing & Wine Technology
 Paper I

Name of Student:

Aniket Adase

Roll No.: Session: 2021-22

Test Date: 21/02/2022 Max. Marks: 60

Obtained Marks:

Invigilator Signature

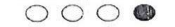
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WRONG METHODS



CORRECT METHOD



| | A | B | C | D | | A | B | C | D | | A | B | C | D | | A | B | C | D | | A | B | C | D | | | | |
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U.G. DEPARTMENT OF MICROBIOLOGY

Skill-Based Course

**Course Exam Name: Fruit Processing & Wine Technology
Paper II**

Name of Student:

Aniket Adase

Roll No.:

Session: 2021-22

Test Date: 22/02/2022

Max. Marks: 40

Obtained Marks:

Invigilator Signature

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- 7 Do not use marker or white fluid to hide the mark

WRONG METHODS CORRECT METHOD



| | 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 type="radio"/> | <input type="radio"/> | <input checked="" 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 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 type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | | 12 | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | | 22 | <input type="radio"/> | <input 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 type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | | 13 | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | | 23 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input 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 checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | | 24 | <input type="radio"/> | <input 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 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 checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | | 16 | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input 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 type="radio"/> | <input type="radio"/> | <input checked="" 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 checked="" type="radio"/> | <input type="radio"/> | | 18 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input 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 checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input 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"/> |




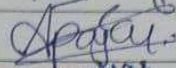


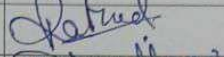
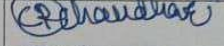
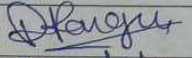
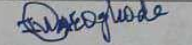
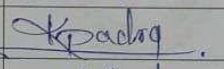
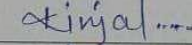

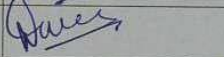
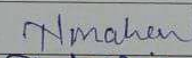
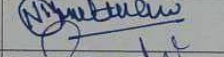
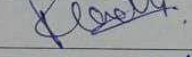
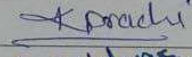



Pranita Gulhane

**Dr. Pranita Gulhane
Skill Based Course Coordinator**

SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR
Department of Microbiology
Skill-Based Diploma Course: Fruit Processing & Wine Technology
Session 2021-2022

**List of the Students: Skill Based Diploma Course: Fruit Processing & Wine
 Technology Second Year Session 2021-2022**

| Sr.No. | Name of Student | Signature |
|--------|-----------------------|--|
| 1. | Aishwarya S. Mohatkar |  |
| 2. | Aniket S. Adase |  |
| 3. | Anjali S. Lokhande |  |
| 4. | Ankit M. Pajai |  |
| 5. | Anuradha S. Paralkar |  |
| 6. | Anushree Muley |  |
| 7. | Atharva L. Rathod |  |
| 8. | Chetna R. Choudhari |  |
| 9. | Dipti M. Rangu |  |
| 10. | Isha V. Arghode |  |
| 11. | Kalpna S. Patra |  |
| 12. | Kinjal S. Kulkarni |  |
| 13. | Mahek R. Burchunde |  |
| 14. | Muskan Verma |  |
| 15. | Neha D. Mahant |  |
| 16. | Nikita N. Motwani |  |
| 17. | Prachi B. Navghare |  |
| 18. | Prachi K. Kapse |  |
| 19. | Rajashree S. Hatwar |  |

| | | |
|-----|----------------------|-----------------------|
| 20. | Rashmi K. Agashe | <u>R. Agashe</u> |
| 21. | Rohan Deshmukh | <u>Rohan Deshmukh</u> |
| 22. | Saptaparna Roy | <u>S. Roy</u> |
| 23. | Sarvesh C. Bagde | <u>S. Bagde</u> |
| 24. | Sharwari D. Halmare | <u>S. Halmare</u> |
| 25. | Shivani S. Deshpande | <u>S. Deshpande</u> |
| 26. | Shreya Zilpe | <u>S. Zilpe</u> |
| 27. | Shruti P. Renge | <u>S. Renge</u> |
| 28. | Swati R. Sharma | <u>S. Sharma</u> |
| 29. | Teneshwari Hirapure | <u>T. Hirapure</u> |
| 30. | Utkarsha Tondare | <u>U. Tondare</u> |
| 31. | Vedanti V. Kali | <u>V. Kali</u> |
| 32. | Yashoda R. Wade | <u>Y. Wade</u> |



Dr. Pranita Gulhane
Department of Microbiology
Science College, Congress Nagar,
NAGPUR.

Second Year Diploma in Fruit processing & Wine Technology
Session 2021-2022

MARK LIST

| Sr. No. | Name of Student | Marks Obtained out of 40 Paper I (Theory) | Marks Obtained out of 40 Paper II (Theory) | Marks Obtained out of 60 (Practical) | Marks Obtained out of 20 (Seminar) | Marks Obtained out of 20 (Project) | Marks Obtained out of 20 (Field Visit) | Total Marks Obtained out of 200 (Grand Total) |
|----------------|------------------------|--|---|---|---|---|---|--|
| 1. | Aishwarya S. Mohatkar | 36 | 35 | 55 | 20 | 20 | 20 | 186 |
| 2. | Aniket S. Adase | 40 | 40 | 55 | 20 | 20 | 20 | 195 |
| 3. | Anjali S. Lokhande | 30 | 34 | 57 | 20 | 20 | 20 | 181 |
| 4. | Ankit M. Pajai | 32 | 34 | 56 | 20 | 20 | 20 | 182 |
| 5. | Anuradha S. Paralkar | 40 | 40 | 58 | 20 | 20 | 20 | 198 |
| 6. | Anushree Muley | 37 | 38 | 55 | 20 | 20 | 20 | 190 |
| 7. | Atharva L. Rathod | 39 | 34 | 57 | 20 | 20 | 20 | 190 |
| 8. | Chetna R. Choudhari | 37 | 38 | 56 | 20 | 20 | 20 | 191 |
| 9. | Dipti M. Rangu | 36 | 36 | 57 | 20 | 20 | 20 | 189 |
| 10. | Isha V. Arghode | 34 | 40 | 58 | 20 | 20 | 20 | 192 |
| 11. | Kalpana S. Patra | 37 | 39 | 56 | 20 | 20 | 20 | 192 |
| 12. | Kinjal S. Kulkarni | 38 | 38 | 58 | 20 | 20 | 20 | 194 |
| 13. | Mahek R. Burchunde | 35 | 39 | 55 | 20 | 20 | 20 | 189 |
| 14. | Muskan Verma | 34 | 35 | 57 | 20 | 20 | 20 | 186 |
| 15. | Neha D. Mahant | 33 | 36 | 56 | 20 | 20 | 20 | 185 |
| 16. | Nikita N. Motwani | 35 | 35 | 57 | 20 | 20 | 20 | 187 |
| 17. | Prachi B. Navghare | 38 | 34 | 58 | 20 | 20 | 20 | 190 |
| 18. | Prachi K. Kapse | 38 | 40 | 55 | 20 | 20 | 20 | 193 |
| 19. | Rajashree S. Hatwar | 35 | 36 | 56 | 20 | 20 | 20 | 187 |
| 20. | Rashmi K. Agashe | 36 | 40 | 58 | 20 | 20 | 20 | 194 |
| 21. | Rohan Deshmukh | 40 | 39 | 57 | 20 | 20 | 20 | 196 |
| 22. | Saptaparna Roy | 40 | 40 | 55 | 20 | 20 | 20 | 195 |
| 23. | Sarvesh C. Bagde | 35 | 35 | 56 | 20 | 20 | 20 | 186 |
| 24. | Sharwari D. Halmare | 36 | 34 | 57 | 20 | 20 | 20 | 187 |
| 25. | Shivani S. Deshpande | 38 | 32 | 58 | 20 | 20 | 20 | 188 |
| 26. | Shreya Zilpe | 35 | 34 | 55 | 20 | 20 | 20 | 184 |
| 27. | Shruti P. Renge | 36 | 36 | 56 | 20 | 20 | 20 | 188 |
| 28. | Swati R. Sharma | 37 | 35 | 57 | 20 | 20 | 20 | 189 |
| 29. | Teneshwari Hirapure | 39 | 34 | 58 | 20 | 20 | 20 | 191 |
| 30. | Utkarsha Tondare | 36 | 36 | 57 | 20 | 20 | 20 | 189 |

| | | | | | | | | |
|-----|-----------------|----|----|----|----|----|----|-----|
| 31. | Vedanti V. Kali | 37 | 36 | 56 | 20 | 20 | 20 | 189 |
| 32. | Yashoda R. Wade | 37 | 38 | 58 | 20 | 20 | 20 | 193 |



Pranita Gulhane

Dr. Pranita Gulhane
Skill Based Course Coordinator



Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

[Established by Government of Central Provinces Education Department by Notification No. 515 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.

Shri/Smt./Ku. *Aniket Adase* is

awarded with Certificate on successful completion of the course titled

Fruit Processing and Kline Technology in

session *2021 - 22* under *Jeevan Shikshan Abhiyan* conducted for

45 hours from *17.12.2021* to *11.02.2022* 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 *A* Grade

Total Credits Earned : 01

M. S. Mohore

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

P. P. Pulhane

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

P. M. Patil

Director
Board of Lifelong Learning
and Extension, RTMNU, Nagpur

**SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR
UG Department of Microbiology
Skill Based Diploma Course: Fruit Processing & Wine Technology
Session 2021-2022
Feedback Form**

Q.1 How would you rate the overall quality of the Diploma Course: Fruit Processing & Wine Technology?

| | |
|--------------|----|
| A. Excellent | 18 |
| B. Good | 12 |
| C. Average | 2 |
| Total | 32 |

Q.2 How well did the Diploma Course: Fruit Processing & Wine Technology meet your expectations?

| | |
|--------------------------|----|
| A. Exceeded expectations | 4 |
| B. Met expectations | 28 |
| C. Below expectations | 0 |
| Total | 32 |

Q.3 How effective were the course instructors in delivering the Diploma Course: Fruit Processing & Wine Technology?

| | |
|-------------------|----|
| A. Very effective | 31 |
| B. Effective | 1 |
| C. Ineffective | 0 |
| Total | 32 |

Q.4 How likely are you to recommend the Diploma Course: Fruit Processing & Wine Technology to others?

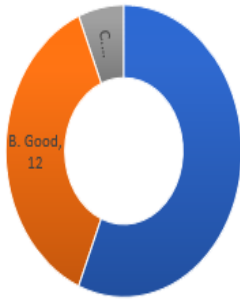
| | |
|----------------|----|
| A. Very likely | 26 |
| B. Likely | 5 |
| C. Unlikely | 1 |
| Total | 32 |

Q.5 How satisfied are you with the practical sessions of the Diploma Course: Fruit Processing & Wine Technology?

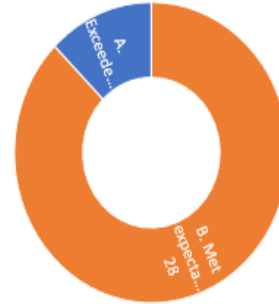
| | |
|-------------------|----|
| A. Very satisfied | 27 |
| B. Satisfied | 3 |
| C. Dissatisfied | 2 |
| Total | 32 |

Feedback Form Responses
UG Department of Microbiology
Skill Based Diploma Course: Fruit Processing & Wine Technology
Session 2021-2022

Que. 1 How would you rate the overall quality of the Diploma Course: Fruit Processing & Wine Technology



Que. 2 How well did the Diploma Course - Fruit Processing & Wine Technology meet your expectations?



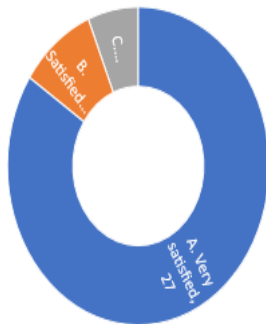
Que. 3 How effective were the course instructors in delivering the Diploma Course Fruit Processing & Wine Technology?



Que. 4 How likely are you to recommend the Diploma Course: Fruit Processing & Wine Technology to others?



Que. 5. How satisfied are you with the practical sessions of the Diploma Course: Fruit Processing & Wine Technology?



Pranita Gulhane

Dr. Pranita Gulhane
 Skill Based Course Coordinator

Amitabh Halder

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

Mahendra Dhere

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