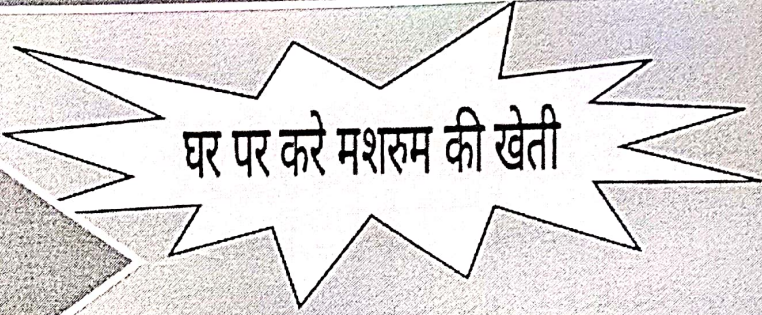




SICES Degree College of Arts, Science and Commerce, Ambarnath
Affiliated to University of Mumbai

Department of Microbiology Organizes



An Exciting and Unique Certificate Course
"Entrepreneurship in Biotechnology:
Mushroom cultivation"

Eligibility → Minimum 10th Pass

Course Fee → 250/-

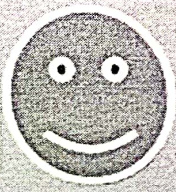
- Course outcomes:**
- ◆ Startup skills
 - ◆ Marketing strategies
 - ◆ Identification of edible mushrooms
 - ◆ Hands on cultivation
 - ◆ Material for hands on will be provided to you
 - ◆ Meeting with the Mushroom cultivator

Contact details →
Course coordinator
Ass. Prof. Aditya Joshi
Contact No: 7045300970
Email: departmentmicrobiology2324@gmail.com

Duration of course → 30 lectures




Learn with Fun,
That will make
you to Earn

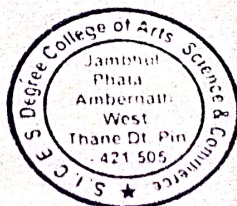


DEPARTMENT OF MICROBIOLOGY
Certificate Course "Entrepreneurship in biotechnology-Mushroom Cultivation"

List of Enroll Students

Sr.No.	Name of Student	Class	Fees Paid
1.	Ashwini Shankar Tambe	TY BSc Micro	300
2.	Graccy Issac	TY BSc Micro	300
3.	Soham Kulkarni	TY BSc Micro	300
4.	Shweta Gautam	TY BSc Micro	300
5.	Ankita Jaiswar	TY BSc Micro	300
6.	Kalyanee Kokate	TY BSc Micro	300
7.	Hassan Ansari	TY BSc Micro	300
8.	Rushikesh Kadam	SY. B.Com	300
9.	Shruti Katamal	FY. B.M.S	300
10.	Shreyansh Sawdekar	FY. B.M.S	300
11.	Satyam Chouhan	FY. B.M.S	300
12.	Abhishek sing	SY. Micro	300
13.	Sakshi singh	FY. B.M.S	300
		Total	3900/-


HEAD DEPARTMENT OF MICROBIOLOGY
SICES DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE
Jambhui Phata, Ambernath (W)





South Indian Children's Education Society's
Degree College of Arts, Science and Commerce
Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505
Accredited by NAAC with B+ Grade
Permanently Affiliated to University of Mumbai

Academic Year 2023-24

CERTIFICATE COURSE APPLICATION FORM



1. Full Name RUSHIKESH RAJESH KADAM
(In capital) (First Name) (Middle Name) (Surname)
2. Department COMMERCE Class SYBCOM
3. Roll number SC 23089 Date of Birth 01/11/2004 Age 19
4. Gender MALE
5. Religion HINDU Category OPEN
6. Permanent Address DATTA CHOWK NEAR APPORV HOSPITAL
SHREE SANKET APPT ROOM NO-02 BADLAPUR (W) 421503
7. WhatsApp/Contact No: 9561123332 E-mail Id rushikeshbavara@gmail.com
8. Name of the Certificate Course Mushroom Cultivation

I hereby certify that, the information given in this application is complete and correct. I agree to comply with the rules and regulations of the SICES Degree College.

Place: Ambarnath
Date: 21/8/23

Rushi
Signature of the Applicant



South Indian Children's Education Society's
Degree College of Arts, Science and Commerce
Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505

Accredited by NAAC with B+ Grade

Permanently Affiliated to University of Mumbai

Academic Year 2023-24

CERTIFICATE COURSE APPLICATION FORM

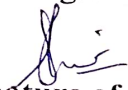


1. Full Name HASSAN MUBARAK ANSARI
(In capital) (First Name) (Middle Name) (Surname)
2. Department Microbiology .Class TY.BSC .
3. Roll number TM123007 .Date of Birth 28/9/2003 . Age 20 .
4. Gender Male .
5. Religion Muslim . Category open .
6. Permanent Address Imran Kohari chawl, Badlapur(w) .
7. WhatsApp/Contact No: 97977733574 . E-mail Id hassanansari¹²⁹¹1291@gmail.com .
8. Name of the Certificate Course Mushroom Cultivation .

I hereby certify that, the information given in this application is complete and correct. I agree to comply with the rules and regulations of the SICES Degree College.

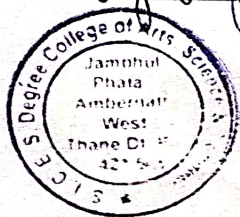
Place: Ambarnath

Date: 19/8/23


Signature of the Applicant

South Indian Children's Education Society's
Degree College of Arts, Science and Commerce, Ambarnath (W)
Certificate Course- Entrepreneurship in Biotechnology- Mushroom Cultivation
Attendance Sheet

Sr. No.	Name of student	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
		12/8	19/8	26/8	2/9	9/9	16/9	30/9	14/10	21/10	4/11
1	TAMBE ANSHU SHANKAR	P	P	P	P	(A)	P	P	P	P	P
2	KANEPOGU GRACY ISAAC	P	(A)	P	P	P	P	P	P	P	P
3	KULKARNI SOHAM VEDANT	P	P	P	P	P	P	P	P	P	P
4	GAUTAM SHWETA KARAME	P	P	P	P	P	P	P	P	P	P
5	JAIWARANKITA LALEHADUR	P	P	P	P	P	P	P	P	P	P
6	KOKATE KALYANEE SAKSHI	P	P	P	P	P	P	(A)	P	P	P
7	ANSARI HASSAN MULAN	P	P	P	P	P	P	P	P	P	P
8	RUSHIKESH KADAM	P	(A)	P	P	P	P	P	P	P	P
9	SHIRUTI KATAMAL	P	P	P	P	P	P	P	P	P	P
10	SHREYANSH SAV.	P	P	P	P	P	P	P	P	P	P
11.	SATYAM CHA	P	P	P	P	P	P	P	P	P	P
12.	ABHISHEK	P	P	P	P	P	P	P	P	P	P
13	SARSHI SINGH	P	P	P	P	P	P	P	P	P	P
	Topic taught.	Introduction of Mushroom	Importance of Mushroom	Oyster Mushroom	Button Mushroom	Raw Materials used	Market for Mushroom	Geographical and other Parameters	Protocol of Mushroom Cultivation	Mild & Edible Mushroom	Sterilization & working of Autoclave.
	Sign of Teacher	me	Mjg	Mjg	Mjg	Mjg	Mjg	Mjg	me	Mjg	Mjg

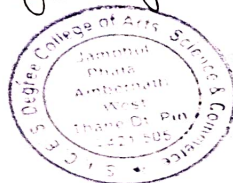


DEPARTMENT OF MICROBIOLOGY
Certificate Course "Entrepreneurship in biotechnology-Mushroom Cultivation"

Attendance Sheet

Sr.No.	Name of Student	④	①	①	③			
		2/12/23	21/12/23	8/1/24	16/1/24			
1.	Ashwini Shankar Tambe	P	P	P	P			
2.	Graccy Issac	P	P	P	P			
3.	Soham Kulkarni	P	P	P	P			
4.	Shweta Gautam	P	P	P	P			
5.	Ankita Jaiswar	P	P	P	P			
6.	Kalyanee Kokate	P	P	P	P			
7.	Hassan Ansari	P	P	P	P			
8.	Rushikesh Kadam	P	P	P	P			
9.	Shruti Katamal	P	P	P	P			
10.	Shreyansh Sawdekar	P	(A)	P	P			
11.	Satyam Chouhan	(A)	P	P	P			
12.	Abhishek sing	P	P	P	P			
13.	Sakshi singh	P	P	P	P			
	Topic Taught	Preparation of Bed & Inoculation of spores	Transfer of Bed in Required Condition	Theory Exam (Observation)	Student Presentation			
	Signature of Teacher	Moshi	Moshi		Moshi			

HEAD DEPARTMENT OF MICROBIOLOGY
SICES DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE
Jamohul Phata, Ambernath (W)





South Indian Children's Education Society's
Degree College of Arts, Science and Commerce
Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505
Accredited by NAAC with B+ Grade
Permanently Affiliated to University of Mumbai

Department Of Microbiology

Certificate Course- Entrepreneurship in Biotechnology: Mushroom Cultivation

Name of the candidate-

Date- 08/01/2024

Class-

Marks - 50

1. Mushrooms are rich in -----
 - a. Proteins
 - b. Carbohydrates
 - c. Fats
 - d. Lipids
2. The common name of Plerotus sajor kaju is
 - a. Shitake mushroom
 - b. Button mushroom
 - c. Paddy straw mushroom
 - d. Oyster mushroom
3. The edible fleshy and macroscopic basidiospore or ascospore bearing fungi are known as
 - a. Bracket fungi
 - b. Mushrooms
 - c. Toad stools
 - d. Parasitic fungi
4. Preservation methods of mushrooms are
 - a. pickling
 - b. Canning
 - c. both
 - d. None of the above
5. Canning is employed for
 - a. long term storage
 - b. short term storage
 - c. both
 - d. none of the above
6. Preservation methods of mushrooms are
 - a. pickling
 - b. Canning
 - c. both
 - d. None of the above

7. During Spawning temperature should be maintain between..
- 20-30
 - 55- 70
 - 80-100
 - 0-10
8. Alternative name of Agaricus is
- Button mushroom
 - Paddy straw mushroom
 - Oyster mushroom
 - Dhingri mushroom
9. The fruit body of mushroom consists of
- Stipe
 - Pileus
 - Pedicel
 - Both a and b
10. The majority of Fungal species
- require external water in order to digest their food
 - reproduce by production of embryos
 - get their nourishment from live organisms
 - rely on dead matter for nourishment
11. Fungi are different from plants because
- they lack organelles
 - they are unable to fix CO₂
 - they rely on absorptive nutrition
 - they are autotrophs
12. A mushroom is...
- Fungi
 - mammal
 - a insect.
 - a fish
13. The dried form of mushroom is called 'as-----
- Spawn
 - Stage
 - Bed
 - Pest
14. Basidiospores are _____ spores.
- exogenous
 - endogenous
 - Both a and b
 - None of these
15. Which of the following is poisonous mushroom?
- Oyster
 - Button
 - Amanitha phalloids*

- d. *Conocybe filaris*
16. Stalk of the mushroom is called as
- Stipe
 - Volva
 - Stamen
 - Gills
17. ----- is used for sterilization
- Autoclave
 - Incubator
 - Shaker
 - None of the above
18. Identification characteristics of poisonous mushrooms is/are
- White gills
 - Cap or stem reddish
 - Stem with ring or skirt
 - All of the above
19. For cultivation of mushrooms ----- can be used.
- Rice or wheat brane
 - cereal straw
 - Sugarcane bagasse
 - All of the above
20. On the lower side of pelius no. of vertical plates like structures are present called ----
- Gills
 - Stipe
 - Stamen
 - Spores
21. Hyphae are
- the filamentous growth structures of many fungi
 - divided by septa in the Ascomycota and Basidiomycota
 - divided by septa in the Oomycota
 - surrounded by a cell wall
22. It grows during _____
- Summer season
 - Winters
 - Rainy season
 - In all seasons
23. An edible mushroom is a mushroom that can potentially be safely eaten.
- .True
 - .False
24. Every mushroom hunter should be familiar with the three most dangerous groups of fungi.
- True
 - False

25. In *Agaricus bisporus*, number of basidiospores in basidium are

- a. One
- b. Two
- c. Three
- d. Four



South Indian Children's Education Society's
Degree College of Arts, Science and Commerce
Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505
Accredited by NAAC with B+ Grade
Permanently Affiliated to University of Mumbai

Department Of Microbiology

Certificate Course- Entrepreneurship in Biotechnology: Mushroom Cultivation

Name of the candidate- Shweta.k. Gaikam

Date- 08/01/2024

Class- Ty, Bsc Microbiology

Marks - 50

1. Mushrooms are rich in -----

- 02/11
- a. Proteins
 - b. Carbohydrates
 - c. Fats
 - d. Lipids

2. The common name of Plerotus sajor kaju is

- 02/11
- a. Shitake mushroom
 - b. Button mushroom
 - c. Paddy straw mushroom
 - d. Oyster mushroom

3. The edible fleshy and macroscopic basidiospore or ascospore bearing fungi are known as

- 02/11
- a. Bracket fungi
 - b. Mushrooms
 - c. Toad stools
 - d. Parasitic fungi

4. Preservation methods of mushrooms are

- X
- a. pickling
 - b. Canning
 - c. both
 - d. None of the above

5. Canning is employed for

- 02/11
- a. long term storage
 - b. short term storage
 - c. both
 - d. none of the above

6. Preservation methods of mushrooms are

- X
- a. pickling
 - b. Canning
 - c. both
 - d. None of the above

7. During Spawning temperature should be maintain between..

- a. 20-30
- b. 55- 70
- c. 80-100
- d. 0-10

8. Alternative name of Agaricus is

- a. Button mushroom
- b. Paddy straw mushroom
- c. Oyster mushroom
- d. Dhingri mushroom

9. The fruit body of mushroom consists of

- a. Stipe
- b. Pileus
- c. Pedicel
- d. Both a and b

10. The majority of Fungal species

- a. require external water in order to digest their food
- b. reproduce by production of embryos
- c. get their nourishment from live organisms
- d. rely on dead matter for nourishment

11. Fungi are different from plants because

- a. they lack organelles
- b. they are unable to fix CO₂
- c. they rely on absorptive nutrition
- d. they are autotrophs

12. A mushroom is...

- a. Fungi
- b. mammal
- c. a insect.
- d. a fish

13. The dried form of mushroom is called as-----

- a. Spawn
- b. Stage
- c. Bed
- d. Pest

14. Basidiospores are _____ spores.

- a. exogenous
- b. endogenous
- c. Both a and b
- d. None of these

15. Which of the following is poisonous mushroom?

- a. Oyster
- b. Button
- c. Amanitha phalloids

d. *Conocybe filaris*

16. Stalk of the mushroom is called as

- a. Stipe
- b. Volva
- c. Stamen
- d. Gills

02
/ /

17. _____ is used for sterilization

- a. Autoclave
- b. Incubator
- c. Shaker
- d. None of the above

02
/ /

18. Identification characteristics of poisonous mushrooms is/are

- a. White gills
- b. Cap or stem reddish
- c. Stem with ring or skirt
- d. All of the above

02
/ /

19. For cultivation of mushrooms _____ can be used.

- a. Rice or wheat brane
- b. cereal straw
- c. Sugarcane bagasse
- d. All of the above

02
/ /

20. On the lower side of pelius no. of vertical plates like structures are present called ----

- a. Gills
- b. Stipe
- c. Stamen
- d. Spores

02
/ /

21. Hyphae are

- a. the filamentous growth structures of many fungi
- b. divided by septa in the Ascomycota and Basidiomycota
- c. divided by septa in the Oomycota
- d. surrounded by a cell wall

02
/ /

22. It grows during _____

- a. Summer season
- b. Winters
- c. Rainy season
- d. In all seasons

02
/ /

23. An edible mushroom is a mushroom that can potentially be safely eaten.

- a. True
- b. False

02
/ /

24. Every mushroom hunter should be familiar with the three most dangerous groups of fungi.

- a. True
- b. False

02
/ /

25. In *Agaricus bisporus*, number of basidiospores in basidium are

- a. One
- b. Two
- c. Three
- d. Four

d



South Indian Children's Education Society's
DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE
AMBERNATH (W.)

Permanently Affiliated to University of Mumbai
Accredited by NAAC with B Grade

CERTIFICATE

This is to certify that (Mr./Ms.) Satyam Ganesh Chouhan of
F.Y. BMS successfully completed the 2 credits (30 Hrs) Certificate Course in
"Entrepreneurship in Biotechnology: Mushroom Cultivation" conducted by the Department of
Microbiology on 11.01.2024 & obtained grade "A+" in the academic year 2023-2024

Received
Satyam

MA
Course Coordinator

MA
Principal



South Indian Children's Education Society's
DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE
AMBERNATH (W.)

Permanently Affiliated to University of Mumbai
Accredited by NAAC with B⁺ Grade

CERTIFICATE

This is to certify that (Mr./Ms.) Shreyansh Dinesh Sawdekar Of
F.Y. BMS successfully completed the 2 credits (30 Hrs) Certificate Course in
"Entrepreneurship in Biotechnology : Mushroom Cultivation" conducted by the Department of
Microbiology on 11.01.2024 & obtained grade "A +" in the academic year 2023-2024

me

Course Coordinator

Received

Shreyansh

me
Principal

South Indian Children's Education Society's
Degree College of Arts, Science and Commerce
Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505
Accredited by NAAC with B+ Grade
Permanently Affiliated to University of Mumbai

Academic Year 2023-24
DEPARTMENT OF MICROBIOLOGY
Certificate Course "Entrepreneurship in biotechnology-Mushroom Cultivation"
FINAL REPORT

Sr. No.	Theory Lectures & Assessment		
	Course Content	Date	Time in Hrs.
1	Introduction of mushroom	12/08/2023	02
2	Importance of Mushroom	19/08/2023	02
3	Oyster Mushroom	26/08/2023	02
4	Button Mushroom	02/09/2023	01
5	Raw Materials used	09/09/2023	01
6	Market for Mushroom	16/09/2023	02
7	Geographical & other Parameter	30/09/2023	02
8	Protocol of Mushroom Cultivation	14/10/2023	01
9	Wild & Edible Mushroom	21/10/2023	02
10	Sterilization & Working of Autoclave	4/11/2023	01
11	Preparation of Bed & Follow up	2/12/2023	4

12	Transfer of Bed	21/12/2023	1
13	Theory Exam(MCQ)	8/1/2024	1
14	Presentations of Participants	16/1/2024	2
	Total	-	24

MNO

HEAD DEPARTMENT OF MICROBIOLOGY
SICES DEGREE COLLEGE - ARTS, SCIENCE & COMMERCE
Jambhul Phata, Ambernath (W)

