



Rayat Shikshan Sanstha's
D. P. Bhosale College, Koregaon

Department of Zoology

INDEX

Skill based Certificate Course on Bee keeping

Year 2017-18

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Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Department of Zoology

NOTICE

2017-18

Date:- 29/09/2017

All the students of B. Sc. II & III are here by informed that Department has organized "**Skill based Certificate Course on Bee Keeping**" from Monday **2nd October 2017**. All student are informed that they should remain present for course on time. It may clearly noted that fine will be collected from absent students.


Incharge


Head,

Department of Zoology

Skill based Certificate Course

On

Bee Keeping





Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Skill based Certificate Course

On

Bee keeping

Organized by

Department of Zoology

Course Incharge

Mr. Jawale C. B.

Course Duration: 02 Oct. 2017 – 10 Nov. 2017

Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon
Syllabus

Title – Skill based Certificate Course on Bee Keeping

Total Hrs- 30

B. Sc. II (Zoology)

Theory

Unit 1

Apiculture development in India. Role of Central Honey Bee Research & Training Institute.

Introduction to Apiculture: Scope and importance

Unit 2

Honey Bee morphology, Anatomy and Life cycle.

Honey bee species and Castes. Origin, systematic and distribution of honey bees.

Unit 3

Social organization in honey bees: Colony life and social organization – Queen, drone, worker.

Communication in honey bees.

Bee enemies and diseases: An introduction, Bee enemies – Wax Moth, Ants, Wasps,

Microorganisms, Pests. Diagnosis and Identification.

Bacterial, viral, Fungal and protozoan diseases of honey bee.

Unit 4

Bee keeping: Tools and Equipment's:

Introduction to types of bee boxes.

Unit 5

Honey Processing and Bee Hive Products

Honey - its properties and application in various fields

Economics in small scale and large scale bee keeping. Economic Value of Commercial Beekeeping.

Practicals

1. Setting and Maintenance of Bee keeping unit.
2. Setting and Maintenance of Honey Processing unit.
3. Breeding and Multiplication of various bees.
4. Propagation of bee plants.


Head
Department of Zoology
D. P. Bhosale College Koregaon



Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon
Department of Zoology
Year : 2017 - 18
Skill based Certificate Course

on

Bee keeping

Objectives:-

- To provide basic knowledge in the field of Biodiversity, Conservation and Wildlife Management
- To generate connection between part professional organizations working in the field of conservation and environment protection.
- To provide an alternate avenue to students
- To create awareness about Biodiversity and Nature Conservation

Course Outcomes :-

By the completion of the course the students should able to --

- Understand the basic life cycle of the honeybee.
- Learn beekeeping tools and equipment.
- Manage beehives for honey production and pollination.
- Learn honey bee diseases and pests.
- Harvest and marketing of honey and other bee products.


In charge

Certificate Course


Head,

Department of Zoology



Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Department of Zoology

Skill based Certificate Course on Bee Keeping

Time Table- 2017-18

Theory & Practical

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
10.15-11.15 Theory	CBJ	VNB	CBJ	VNB	CBJ	VNB
08.30-10.30 Practical	CBJ	VNB	CBJ	VNB	CBJ	VNB

VNB – Mr. V.N. Bankar

CBJ – Mr. C. B. Jawale

VN Bankar
C.B. Jawale


VN Bankar
Head
Department of Zoology
D. P. Bhosale College, Koregaon



Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon
Department of Zoology
Skill based Certificate Course on Bee Keeping
Time Table- 2017-18
Theory & Practical

Date	Time	Theory / Practical	Name of the teacher
02/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
03/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
04/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
05/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
06/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
07/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
09/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
10/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
11/10/2017	08.30-10.30	Practical	Mr. C.B. Jawale
12/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
13/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
14/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
16/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
17/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
18/10/2017	08.30-10.30	Practical	Mr. C.B. Jawale
20/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
21/10/2017	08.30-10.30	Practical	Mr. V.N. Bankar
23/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
24/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar

25/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
26/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
27/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
28/10/2017	08.30-10.30	Practical	Mr. V.N. Bankar
30/10/2017	10.15-11.15	Theory	Mr. C.B. Jawale
31/10/2017	10.15-11.15	Theory	Mr. V.N. Bankar
01/11/2017	08.30-10.30	Practical	Mr. C.B. Jawale
02/11/2017	08.30-10.30	Practical	Mr. V.N. Bankar
03/11/2017	08.30-10.30	Practical	Mr. C.B. Jawale
06/11/2017	08.30-10.30	Practical	Mr. C.B. Jawale
07/11/2017	08.30-10.30	Practical	Mr. V.N. Bankar
08/11/2017	08.30-10.30	Practical	Mr. C.B. Jawale
09/11/2017	08.30-10.30	Practical	Mr. V.N. Bankar
10/11/2017	08.30-10.30	Practical	Mr. C.B. Jawale


Head
Department of Zoology
D. P. Bhosale College Koregaon



Rayat Shikshan Sanstha's
D.P. Bhosale College, Koregaon
Student list 2017-18

Skill based Certificate Course on Bee Keeping

Sr. No.	Roll No.	Name of the Students
1	1321	Mane Kumar Hanmant
2	1322	Mane Nikita Anandrao
3	1323	Mane Suniket Santosh
4	1324	Nikam Akshay Sunil
5	1325	Nikam Nikita Ankush
6	1326	Nikam Nikita Dilip
7	1327	Nikam Shital Vijay
8	1328	Panskar Ravina Vasant
9	1329	Patwekar Afreen Sharif
10	1330	Pawar Pooja Raju
11	1371	Gaikwad Akshay Dattatray
12	1372	Jagadale Pragati Dattatray
13	1373	Kadam Sayli Ramdas
14	1374	Kate Rahul Vitthal
15	1375	Kshirsagar Shivaji Anil
16	1376	Mane Sneha Dattatray
17	1377	Nadaf Imran Innus
18	1378	Pawa Ashutosh Kailas
19	1379	Pawar Bhavana Dattatray
20	1380	Pawar Pooja Ajay
21	1381	Pawar Supriya Sambhaji
22	1382	Raskar Amit Abasaheb
23	1383	Sawant harshada Adhikrao
24	1384	Vibhute Pratik Raju
25	1385	Barge Gauri Vijay

Wankar
Head

Department of Zoology
D. P. Bhosale College Koregaon

Roll No.	Name of the Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1321	Mane K. H.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1322	Mane N. A.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1323	Mane S. S.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1324	Nikam A. S.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1325	Nikam N. A.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1326	Nikam N. D.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1327	Nikam S. V.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1328	Panskar R. V.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1329	Patwekar A. S.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1330	Pawar P. R.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1371	Gaikwad A. D.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1372	Jagdale P. D.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1373	Kadam S. R.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1374	Kate R. V.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1375	Kshirsagar S. A.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1376	Mane S. D.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1377	Nadaf I. I.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1378	Pawa A. K.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1379	Pawar B. D.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1380	Pawar P. A.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1381	Pawar S. S.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1382	Raskar A. A.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1383	Sawant H. A.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1384	Vibhute P. R.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1385	Barge G. V.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1321	Mane K. H.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

Pawale
Head

Department of Zoology
D. P. Bhosale College Koregaon

Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Skill based Certificate Course on Bee Keeping

STUDENT ROLL CAL

Month : November 2017

Roll No.	Name of the Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1321	Mane K. H.	KH	KH	KH			KH	KH	KH	KH	A	KH	KH	KH	KH	KH	KH	KH													
1322	Mane N. A.	A	N.A	N.A			A	N.A	A	N.A	A	N.A	N.A	A	N.A	N.A	N.A	N.A													
1323	Mane S. S.	MSS	MSS	MSS			MSS	MSS	MSS	MSS	MSS	A	MSS	MSS	MSS	MSS	MSS	MSS													
1324	Nikam A. S.	N.A	N.A	N.A			N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A													
1325	Nikam N. A.	N.A	N.A	N.A			N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A													
1326	Nikam N. D.	NDN	NDN	NDN			NDN	A	NDN	A	NDN	NDN	NDN	NDN	NDN	NDN	NDN	A	NDN	NDN											
1327	Nikam S. V.	S.V	A	S.V			S.V	S.V	S.V	S.V	S.V	S.V	S.V	S.V	S.V	S.V	A	S.V	S.V												
1328	Panskar R. V.	P.V	P.V	P.V			P.V	P.V	P.V	P.V	P.V	P.V	P.V	P.V	P.V	P.V	P.V	P.V													
1329	Patwekar A. S.	A.S	A.S	A.S			A.S	A.S	A.S	A.S	A.S	A.S	A.S	A.S	A.S	A.S	A.S	A.S													
1330	Pawar P. R.	P.P	P.P	P.P			P.P	P.P	P.P	P.P	P.P	P.P	P.P	P.P	P.P	P.P	P.P	P.P													
1371	Gaikwad A. D.	A.D	A.D	A.D			A.D	A.D	A.D	A.D	A.D	A.D	A.D	A	A.D	A.D	A.D	A.D													
1372	Jagadale P. D.	A	P.D	P.D			P.D	P.D	A	P.D	P.D	P.D	P.D	P.D	P.D	P.D	P.D	P.D													
1373	Kadam S. R.	K.A	K.A	K.A			K.A	K.A	K.A	K.A	A	K.A	A	K.A	K.A	K.A	K.A	K.A													
1374	Kate R. V.	R.V	R.V	R.V			R.V	R.V	R.V	R.V	R.V	R.V	R.V	R.V	R.V	R.V	R.V	R.V													
1375	Kshirsagar S. A.	S.A	S.A	A			S.A	S.A	S.A	S.A	S.A	S.A	S.A	S.A	S.A	S.A	S.A	S.A													
1376	Mane S. D.	M	M	M			M	M	M	M	M	A	A	M	M	M	M	M													
1377	Nadaf I. I.	I.I	I.I	I.I			I.I	I.I	I.I	I.I	I.I	I.I	I.I	I.I	I.I	I.I	I.I	I.I													
1378	Pawa A. K.	P	P	P			P	A	P	P	P	P	P	P	P	P	P	P													
1379	Pawar B. D.	A	B.D	A			B.D	B.D	B.D	B.D	A	B.D	B.D	A	B.D	B.D	B.D	B.D													
1380	Pawar P. A.	P.A	P.A	P.A			P.A	P.A	P.A	P.A	P.A	P.A	P.A	P.A	P.A	P.A	P.A	P.A													
1381	Pawar S. S.	P.S	P.S	P.S			P.S	P.S	P.S	P.S	P.S	P.S	P.S	P.S	P.S	P.S	P.S	P.S													
1382	Raskar A. A.	A.A	A.A	A.A			A.A	A.A	A.A	A.A	A.A	A.A	A.A	A.A	A.A	A.A	A.A	A.A													
1383	Sawant H. A.	H.A	A	H.A			H.A	H.A	H.A	H.A	H.A	A	H.A	A	H.A	H.A	H.A	H.A													
1384	Vibhute P. R.	P.R	P.R	A			P.R	P.R	P.R	P.R	P.R	P.R	P.R	P.R	P.R	P.R	P.R	P.R													
1385	Barge G. V.	G.V	G.V	G.V			G.V	G.V	G.V	G.V	A	G.V	G.V	G.V	G.V	G.V	G.V	G.V													
1321	Mane K. H.	A	more	more			more	A	more	more	more	more	more	more	more	more	more	more													

J. Sawale
Head

Department of Zoology
D. P. Bhosale College Koregaon

Rayat Shikshan Sanstha's

D. P. Bhosale College, Koregaon

Department of Zoology

Question Paper

Skill based Certificate Course on Bee Keeping

Marks : 30

Instructions

1. All the questions are compulsory
 2. Questions to the right Indicate full Marks
 3. Draw neat and Labelled diagrams wherever necessary
-

Que. 1: Long questions (Any 2)

20

- a. Describe social organization of Honeybees.
- b. Describe Bee enemies, diagnosis and Identification.
- c. Explain tools and Equipment's used for bee keeping.

Que. 2: Write short notes on following (Any 2)

10

- a. Types of bee boxes
- b. Honey Processing and Bee Hive Products
- c. Honey bee species



Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

Student list 2017-18

Skill based Certificate Course on Bee Keeping

Mark List

Sr. No.	Roll No.	Name of the Students	Que. 1 20	Que. 2 10	Total Marks 30
1	1321	Mane Kumar Hanmant	18	08	26
2	1322	Mane Nikita Anandrao	15	05	20
3	1323	Mane Suniket Santosh	13	09	22
4	1324	Nikam Akshay Sunil	12	08	22
5	1325	Nikam Nikita Ankush	19	08	27
6	1326	Nikam Nikita Dilip	19	09	28
7	1327	Nikam Shital Vijay	17	08	25
8	1328	Panskar Ravina Vasant	16	09	25
9	1329	Patwekar Afreen Sharif	15	08	23
10	1330	Pawar Pooja Raju	12	06	18
11	1371	Gaikwad Akshay Dattatray	14	07	21
12	1372	Jagadale Pragati Dattatray	18	08	26
13	1373	Kadam Sayli Ramdas	17	06	23
14	1374	Kate Rahul Vitthal	18	06	24
15	1375	Kshirsagar Shivaji Anil	15	09	24
16	1376	Mane Sneha Dattatray	16	07	23
17	1377	Nadaf Imran Innus	17	06	23
18	1378	Pawa Ashutosh Kailas	19	09	28
19	1379	Pawar Bhavana Dattatray	16	08	24
20	1380	Pawar Pooja Ajay	17	09	26
21	1381	Pawar Supriya Sambhaji	18	07	25
22	1382	Raskar Amit Abasaheb	19	09	28
23	1383	Sawant harshada Adhikrao	15	08	23
24	1384	Vibhute Pratik Raju	19	09	28
25	1385	Barge Gauri Vijay	14	06	20

M. Banke
Head

Department of Zoology
D. P. Bhosale College Koregaon



**Rayat Shikshan Sanstha's
D. P. Bhosale College, Koregaon**

Department of Zoology

Report

Skill based Certificate Course on Bee keeping

Increasing demand for honey and its by-products- bees wax, royal jelly, etc. in various food, pharmaceutical and cosmetic industries has an expanding market in developing as well as developed countries. Apiculture, the main source of honey, is a low maintenance and cost effective process. Associated intimately with agriculture and forest, the practice of apiculture not only yields products of economic value, but also helps to sustain biodiversity. Apiculture has an important role to play in the self-employment sector in the present scenario.

Department of Zoology has offered this course for B.Sc. II students for increasing the employment opportunity in rural sector and thus enhancing the ancillary income of the beekeepers & farmers.



Mr. V. N. Bankar delivering lecture on Bee keeping

This course was conducted during the 02nd October 2017 to 10 November 2017. For this course 25 students have been enrolled. During this period the lectures and practicals were conducted by resource faculties. Mr. V.N. Bankar and Mr. C.B. Jawale conducted the practicals and theory period.

Specific outcome of beekeeping as an income generation activity Bees play an important role in the pollination of many flowering plants, thus increasing the yield of certain crops such as sunflower and various fruits. Honey is a delicious and highly nutritious food.

V.N. Bankar

Head

**Department of Zoology
D. P. Bhosale College Koregaon**



"Education through Self-help is our Motto"- KARMAVEER
Rayat Shikshan Sanstha's

D.P. Bhosale College, Koregaon

District – Satara. (M.S.)
NAAC Reaccredited 'A' (with CGPA 3.12)



Skill based Course

CERTIFICATE

This is to certify that **Mr. / Miss** ----- **Class :** -----

has successfully completed "**Skill based Certificate Course**" on -----

---- From ----- to ----- Organized by Department of Zoology, D. P. Bhosale College, Koregaon,

District- Satara, (M.S.).

Incharge



Head
Department of Zoology