



**H.K.E. SOCIETY'S  
A. V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE  
ALAND**



**NAAC B+ Grade**

**Estd: 1980**

**VALUE ADDED COURSE**

**On**

**Apiculture**

**Under Dept. of Zoology**

**2019-20**

**Course Coordinator**

**Miss. Ambika Kalshetty**

**Faculty of ZOOLOGY Dept.**

To,  
The Principal  
A.V Patil Arts, Science & Commerce College  
Aland

Date:14.06.2019

**Sub:** Request to grant permission to start Value added course on Introduction to Apiculture from the academic year 2019-20: Reg.

Respected Sir,

We would like to start the Value-added course on "Apiculture" from the academic year 2019-20: with intake of 50 students. Please permit us to start the Value-added course and do the needful.

Thanking You.



HOD  
Head of the Department of  
Zoology  
Arts, Science & Commerce College  
Aland.



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**Meeting Minutes for Institutional Board of Studies for Value added Course on  
Apiculture.**

The institutional Board of Studies of the Dept of Zoology for the Value-added course on Apiculture held on 24.06.2019 in IQAC Room at 10:30 am.

Sl No.	Name	Institute	Designation
1	Prof. Nagendra Masuti Principal of A.V.Patil degree college ALAND.	A.V Patil Arts, Science & Commerce College Aland	Chairman
2	Dr. Ramesh Masarbo IQAC Coordinator	A.V Patil Arts, Science & Commerce College Aland	member
3	Prof. Ambika Kalshetty Guest faculty	A.V Patil Arts, Science & Commerce College Aland	Co ordinator
4	Prof. Devadas Chetti Asst. Professor	S.S Margol College Shahabad	member

In the beginning of the meeting the Chairman of the BOS Dr. Ramesh Masarbo welcomed all members and briefed them about the academic activities of the Bee Keeping & Honey Processing. The members expressed their highly appreciation and satisfaction about the activities of the department.

After that institutional BOS discussed and resolved the following items:

**Item 1. Starting of the Value-added course on Apiculture**

The BOS discussed the item and resolved to start the Value-added course on Apiculture

**Item 2. Approval of the Syllabus for Value added course.**

The BOS discussed and approved the syllabus for the Value-added course on Apiculture.

**Item 3. Approval of admission criteria**

The BOS discussed and approve the criteria for admission and resolved that any students enrolled in UG course can enroll in this course. In addition to this BOS also finalized the exam pattern.

Meeting of the BOS was concluded with the vote of thanks by Prof. Ambika K Guest Faculty in Department of Zoology.

The following members were present in the meeting:

**Name of the Member of BOS**

**Signature**


1. Prof. Nagendra Masuti



2. Dr. Ramesh Masarbo



3. Prof. Ambika Kalashetty



4. Prof. Devadas Chetti





**Value Added Course Guidelines:**

It is to inform that the following guidelines are to be followed for the conduct of Value Added Course (VAC) on **Apiculture** by the Department of **ZOOLOGY** , during the period of 2019-20.

**A) REGISTRATION/ELIGIBILITY FOR VAC:**

1. Students have at least 10+2 minimum Pass in criteria.
2. A Student will be permitted to register for only one VAC in a semester.
3. A Student can register for VAC in any semester except during the first semester of his/her study.
4. Each student has to study at least one Value Added Course in an academic year. However there is no limit on the maximum number of VAC a student can complete during his/her period of study in the College.
5. Undergraduate students from the Faculty of Sociology .
6. A student can register to VAC and Collect Separate registration form, From the Department of Sociology.
7. Age: **No age limit.**
8. Selection Procedure to VAC on the bases of Merit.
10. The VAC can be offered only if there are at least/Minimum 10 (Five) students or Maximum 150 (Thirty-Fifty) students opting for it.
11. There is No registration fees

**B) CONDUCT OF VAC CLASSES:**

1. The Classes should be conducted two hour in a week during the academic year and as per the college time table for the academic year 2019-20.
2. The Classes for VAC shall be held in hybrid mode (i.e., Theory and Practical).

**C) DURATION OF COURSE: 4 Months /30 Hours**

1. This 30 Hours with a combination of 20 Hours in regular theory classes. However the combination of regular theory classes and VAC classes shall be decided by the Head Department Sociology /with the approval of our college Principal.
2. The conduct exam of 50 Marks including theory and Practical.
3. After successfully compilation of VAC Certificate can issue to all the students.

**D) CERTIFICATION OF THE COURSE:** The candidate who has 80% attendance in the class shall be eligible for certification. Certificate to the candidate shall be issued after getting the report from the institution about the attendance of the candidate and the program conducted.





## Value added course on Apiculture

**PREAMBLE :** Globalization of education and economy has led the University Grants Commission (UGC) to reorient and reshape its policies and programs to make the current Indian Higher Education System more relevant and career-oriented with focus on quality and excellence. It is envisaged that professionally qualified graduates with a sound knowledge of their core disciplines and expertise in a concerned skill will have more openings in service, industry and self-employment sectors. Demand and scope for such professionally trained graduates are visible in the applied fields of almost all basic/core disciplines and faculties in the current changing global scenario and is likely to increase in the future.

Value added course in **Apiculture** was introduced for Undergraduate students of Science, the academic year 2019- 20 with a view to enhance essential for employability. This syllabus, emphasis on development of entrepreneurial potential and skills amongst the students. From the academic year 2019-20, the University has introduced Credit Based Semester and Grading System with continuous evaluation involving Internal and External Assessment. This syllabus is modularized offering opportunity to learners to study techniques

### OBJECTIVES OF THE COURSE:

- 1) To inculcate importance of Apiculture in relation with entrepreneurship development.
- 2) To give students knowledge about various techniques of Apiculture and its marketing to make them self sustainable after graduation.
- 3) To teach techniques of construction of Bee Hives and its maintenance.
- 4) To teach students about Honey production and health related problems with Honey bees.

This course will provide an introduction to Gender Sensitization. This course will cover number of topics such as women studies, women and law, approaches to feminism etc. This course will prepare the students to under the various issues related to gender and society.

**Medium of Instruction:** English

**Course Structure and Examination Scheme:**

**Total contact hours:**

Theory Classes: 30 Hours

**Mode of Examination:**

MCQ Exam: 50 Marks

**Eligibility:** Students enrolled in B Sc. I, II & III Year

**No. of Seats:** 60



Value added Course on Apiculture

## Syllabus

<b>Unit 1 Introduction to apiculture – scope, importance</b>	<b>03 hr</b>
History of bee keeping, definition, bee keeping in India Different species of honey bee	
<b>Unit 2 Honey bee morphology, Anatomy and life cycle</b>	<b>10 hr</b>
Basic concept of morphology of honey bee indigenous, exotic. Social organization in honey bee, colony and social organization queen, Drone, worker. Social behavior of honey bee	
<b>Unit 3 Seasonal management of honey bee colonies</b>	<b>05 hr</b>
Spring management and autumn management Winter management	
<b>Unit 4 Honey bee enemies and diseases and economics of honey bee</b>	<b>12 hr</b>
Bee enemies : wax moth, ants, micro organism and identification Bacterial , viral, fungal, protozoan disease. Economics of bee keeping in small scale and large scale bee keeping Preparing bankable bee keeping projects.	

### Reference Books:

1. Graham, J M (1992) The hive and the honey bee. Dadant and Sons, Hamilton, Illinois.
2. Mishra R.C. (1995) Honey bees and their management in India. ICAR Publication, New Delhi.
3. Singh, S. (1971) Beekeeping in India, ICAR publication.
4. Bee Keeping Theory & Practice – D.R. Kogonza
5. The Bee Keeper's Handbook – Diana Sammataro & Alphonse Avitabile
6. Keeping Honey Bees – Malcolm T. Sanford & Richard E. Bonney





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Date: 26.06.2019

**NOTICE**

All the students are hereby informed that, the Department of Zoology is starting the Value-added course on **Apiculture** from the **01.07.2019** interested students can enroll their names on or before **09.07.2019** in the Department of Zoology.

**HOD**

Head of Department of  
Zoology  
H. K. E. Society's  
A. V. Patil Degree College,  
Aland

**Principal**

**PRINCIPAL  
H. K. E. SOCIETY'S  
A.V. Patil Degree College,  
ALAND**



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ALAND



Value added Course on Apiculture.  
Enrolment List

SL.No	NAME OF THE STUDENT	Class	Signature
1	Annarao Shrishail	B.Sc II	[Signature]
2	Abhishek Anil	BSC II	[Signature]
3	Kailash Shivappa	BSC II	[Signature]
4	Kallappa Ambadas Panchal	BS II	[Signature]
5	Karabasappa Shivalingappa	BS II	[Signature]
6	Karthik Vidyadhar	BS II	[Signature]
7	Kashinath Sharanappa	BSC II	[Signature]
8	Nagaraj Saibanna	BSC II	[Signature]
9	Padmavati Mahaveer	BSC II	[Signature]
10	Rahul Mallinath	BSC II	[Signature]
11	S Prashantkumar Revappa	BSC II	[Signature]
12	Sudharani Gundappa	BSC II	[Signature]
13	Sunil Babu	BSC II	[Signature]
14	Viqar Ahmed Siddique	BSC II	[Signature]
15	Zaiba Safiya Zahiruddin	BSC II	[Signature]
16	Aisha bi Liyaqath Ali	BSC II	[Signature]
17	Asiyabegum Ghudusab	BSC II	[Signature]
18	Ahmed Gousesab Peerzade	BSC II	[Signature]
19	Ekbote Vikas Venkatesh	BSC II	[Signature]
20	Kamble Pooja Vyankat	BSC II	[Signature]
21	Ajeykumar Mahadev	B. Sc IV	[Signature]
22	Kousar Jahan Moinuddin	B. Sc IV	[Signature]
23	Nagaraj Shivasharanappa	B. Sc IV	[Signature]
24	Shireen Banu Maheboob	B. Sc IV	[Signature]
25	Ajaykumar Ambaraya	B. Sc IV	[Signature]
26	Bhagyashree Mahantayya	B. Sc IV	[Signature]
27	Chandrakant Shivalingappa	B. Sc IV	[Signature]
28	Manjunath Gunderao	B. Sc IV	[Signature]
39	Manoja Bhimashankar	B. Sc IV	[Signature]
30	Ramesh Prahladrao	B. Sc IV	[Signature]
31	Sundaramma Mallikarjun	B. Sc IV	[Signature]
32	Shagufta Begum	B. Sc IV	[Signature]
33	Vikas Vithal	B. Sc IV	[Signature]
34	Amol Rathod Thavaru	B. Sc IV	[Signature]

35	Kashinath Marabe	B.Sc IV	Kashinath
36	Tushar Sanjay Miskeen	B.Sc IV	Tushar
37	Guttedar Shivarajkumar	B.Sc IV	Guttedar
38	Tathagath Prakash	B.Sc IV	Tathagath
39	Bhushan Anantkumar	B.Sc IV	Bhushan
40	Dilshad Begum	B.Sc IV	Dilshad
41	Amar Shrishail	B.Sc VI	Amar
42	Asiya Anjum	B.Sc VI	Asiya
43	Bhouramma Gundappa	B.Sc VI	Bhouramma
44	Ambika Mahadev	B.Sc VI	Ambika
45	Najma Begum	B.Sc VI	Najma
46	Jyoti Anandraya	B.Sc VI	Jyoti
47	Kasturi Shantappa	B.Sc VI	Kasturi
48	Laxmi Basavaraj	B.Sc VI	Laxmi
59	Lakshmikant Devendra	B.Sc VI	Lakshmikant
50	Mallikarjun Shivalingappa	B.Sc VI	Mallikarjun
51	Patne Ajit Kashiraya	B.Sc VI	Patne
52	Pooja Vishwanath	B.Sc VI	Pooja
53	Shivasharan S. Almad	B.Sc VI	Shivasharan
54	Shrikant Anandraya	B.Sc VI	Shrikant
55	Shivaraj Pandit Chavan	B.Sc VI	Shivaraj
56	Togare Nagesh C.	B.Sc VI	Togare
57	Vijayalakshmi Mathapati	B.Sc VI	Vijayalakshmi
58	Dhanraj Siddramappa	B.Sc VI	Dhanraj
59	Jeevan Baburao Sullad	B.Sc VI	Jeevan
60	Md Asif Ali Md Salauddin	B.Sc VI	Md Asif



HEAD

Dept. Of Chemistry  
A.V. Patil Degree College  
ALAND, Dist: Kalaburagi.



PRINCIPAL

H. K. E. SOCIETY'S  
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ALAND



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**Value added Course on Apiculture  
Time-Table (2019-20)**

The classes for the value added course are conducted according to the college time table on the following days.

Sl No.	Days	Time	Room No.
01	Tuesday	03.10 to 04.10	1, 2, 3
02	Friday	03.10 to 04.10	1, 2, 3

Total hours per week 2 hours

  
Course coordinator

  
IQAC Coordinator

  
Principal

PRINCIPAL  
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ALAND





# H.K.E. SOCIETY'S A. V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE ALAND



Sl. No	NAME OF THE STUDENT	Value added Course on Apiculture																															
		No. of Classes	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	
1	Annarao Shrishail		1	2	2	3	4	5	6	7	7	8	8	9	10	11	12	12	13	14	15	16	17	18	19	20	21	22	23	24	25	25	
2	Abhishek Anil		1	1	1	2	2	2	3	4	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20	21	22	23	
3	Kailash Shivappa		1	1	2	2	3	4	4	5	6	6	7	8	9	10	11	12	13	14	15	16	17	17	18	19	20	21	22	23	23	23	
4	Kallappa Ambadas P		1	1	2	2	3	3	4	5	5	6	6	7	7	8	8	9	10	11	12	13	14	15	16	17	17	18	19	20	21	21	
5	Karabasappa S		0	0	0	1	1	2	2	3	4	5	5	6	6	7	7	8	8	9	10	11	12	13	14	15	16	17	17	18	19	20	21
6	Karthik Vidyadhar		1	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	25	26	26	26	
7	Kashinath Sharanappa		0	0	0	1	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	22	22	22	
8	Nagaraj Saibanna		0	0	0	1	1	1	2	2	3	3	4	4	5	5	6	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
9	Padmavati Mahaveer		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	21	21	21	22	23	23	24	24	25	
10	Rahul Mallinath		1	1	2	3	4	5	6	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	24	24	24	
11	S Prashantkumar R		1	1	2	2	3	4	5	6	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	25	25	
12	Sudharani Gundappa		1	2	3	4	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	27	
13	Sunil Babu		0	0	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	27	
14	Viquar Ahmed Siddique		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	25	25	26	26	26	
15	Zaiba Safiya Zahiruddin		1	1	1	1	2	2	3	4	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
16	Aisha bi Liyaqath Ali		0	0	1	2	3	4	5	6	6	7	7	8	8	9	10	11	12	13	14	15	15	16	17	18	19	20	21	22	23	24	
17	Asiyabegum Ghudusab		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	27	27	27	
18	Ahmed Gousesab P		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	25	25	26	27	
19	Ekbote Vikas Venkatesh		1	2	3	4	5	6	7	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
20	Kamble Pooja Vyankat		1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	21	22	23	23	23	24	25	25	
21	Ajeykumar Mahadev		1	1	2	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	26	26	
22	Kousar Jahan M		0	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	28	

23	Nagaraj S	0	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				
24	Shireen Banu M	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	23	23	23	24				
25	Ajaykumar Ambaraya	0	1	2	2	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	23	24				
26	Bhagyashree Mahantayya	1	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11	12	12	13	14	15	16	17	18	19	20	21	22			
27	Chandrakant Shivalingappa	1	1	1	2	2	3	4	5	5	6	7	8	9	10	11	12	12	13	14	15	16	17	18	19	20	21	22	23	23	24		
28	Manjunath Gunderao	1	1	1	2	2	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	22	23	24			
29	Manoja Bhimashankar	0	0	0	1	2	2	3	4	5	6	7	8	8	9	10	11	12	13	14	15	16	17	18	18	19	20	21	22	23	24		
30	Ramesh Prahladao	1	1	1	2	2	3	4	5	6	7	8	8	9	10	11	12	13	14	15	16	17	18	18	19	20	21	21	22	24			
31	Sundaramma M	1	1	1	2	2	3	4	5	5	6	7	7	8	9	10	11	12	13	14	15	15	16	17	18	19	20	21	22	23	24		
32	Shagufta Begum	0	1	1	2	2	3	4	5	6	7	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
33	Vikas Vithal	1	1	1	2	2	3	4	5	6	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24			
34	Amol Rathod Thavaru	1	1	1	2	3	4	5	6	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26			
35	Kashinath Marabe	0	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	23	24	24	25			
36	Tushar Sanjay M	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	21	22	23	23	24	24	25			
37	Guttedar Shivaraj	0	0	0	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	25			
38	Tathagath Prakash	1	1	1	2	2	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	23	23	24		
39	Bhushan Anantkumar	1	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	24	25			
40	Dilshad Begum	0	0	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		
41	Amar Shrishail	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	24	25	25	25		
42	Asiya Anjum	0	1	2	3	4	5	6	6	7	8	9	10	11	12	13	14	15	16	17	18	18	19	20	21	22	23	24	24	24			
43	Bhouramma G	1	1	1	2	2	3	4	5	5	6	7	8	9	10	11	12	12	13	14	15	15	16	17	17	17	18	19	20	21	22		
44	Ambika Mahadev	1	1	2	2	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	24	24		
45	Najma Begum	0	0	1	1	3	3	4	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	24		
46	Jyoti Anandraya	0	0	1	1	2	2	3	3	4	4	5	6	6	7	7	8	9	10	11	12	12	14	15	16	17	18	19	20	21	22	23	24
47	Kasturi Shantappa	1	1	1	2	2	3	4	5	6	7	7	8	8	9	10	11	12	13	14	15	16	17	17	18	19	20	21	22	23	23	23	
48	Laxmi Basavaraj	1	1	1	2	2	3	3	4	4	5	5	6	6	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	22	
49	Lakshmikant D	0	1	2	3	4	5	6	7	8	9	10	11	12	12	13	14	15	16	17	18	19	20	20	21	22	23	23	23	24	24	24	
50	Mallikarjun S	1	1	2	2	3	3	4	4	5	6	7	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	22	22	23	
51	Patne Ajit Kashiraya	1	2	3	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	26	26		
52	Pooja Vishwanath	1	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
53	Shivasharan S. Almad	0	1	1	2	3	4	5	6	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	21	22	23	24	24	24	25	
54	Shrikant Anandraya	0	1	1	2	3	4	5	6	7	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	24	24	25	
55	Shivaraj Pandit C	0	0	0	1	1	2	2	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	23	23	

56	Togare Nagesh C.	0	0	1	2	3	4	5	5	6	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24	24	
57	Vijayalakshmi M	0	0	1	1	2	2	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
58	Dhanraj Siddramappa	1	1	2	3	4	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
59	Jeevan Baburao Sullad	0	1	1	2	3	4	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
60	Md Asif Ali Md S	0	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	28	
	Faculty Signature	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>		

*[Signature]*  
Course Coordinator

*[Signature]*  
IQAC Coordinator

*[Signature]*  
**Principal**  
PRINCIPAL  
H. K. E. SOCIETY'S  
A.V. Patil Degree College,  
ALAND



H.K.E. SOCIETY'S  
A. V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE  
ALAND



Date:

### NOTICE

All the students enrolled in Value added course on Apiculture are hereby informed that, the course examination is scheduled on 08/11/2019.

**HOD**

Head of the Department of  
Zoology  
Arts, S. & Com. College  
ALAND.

**Principal**

**PRINCIPAL**  
**H. K. E. SOCIETY'S**  
**A.V. Patil Degree College,**  
**ALAND**





**Multiple Choice Questions**

**Time: 1 hr.30 min.**

**Marks: 50**

Instructions :

1. Answer all questions each carries one mark.
2. No any negative marks.

1. Rearing of honey bee is called .....

- A) Sericulture B) Lac culture C) Vermiculture D) Apiculture

2. The process of rearing honeybee artificially for the production of Honey and Bee products is called as -----

- A) Horticulture B) Apiculture C) Sericulture D) pisciculture

3. In Maharashtra board is engaged in research and extension of bee keeping

- A) KVI B) CBI C) AGI D) KVIC

4. The primary objective of beekeeping is to increase

- A) Propagation B) Honey extraction C) Crop production D) Wax production

5. The honey bees are belong to phylum-----

- A) Mollusca B) Annelida C) Arthropoda D) Echinodermata

6. The honey bees are belong to class-----

- A) Hymenoptera B) Insecta C) Arthropoda D) Aves

7. The honey bees are belong to order-----

- A) Hymenoptera B) Insecta C) Arthropoda D) Aves

8. ----- species of honeybee is more medicinal importance

- A) Apis mellifera B) Apis dorsata C) Apis cerana indica D) Apis florae

9. ----- is commonly known as Giant bee

- A) Apis mellifera B) Apis dorsata B) Apiculture C) Apis cerana indica D) Apis florae

10. ----- is commonly known as ferocious bee

- A) Apis mellifera B) Apis dorsata C) Apis cerana indica D) Apis florae

11. ----- is commonly known as European bee  
A) *Apis mellifera* B) *Apis dorsata* C) *Apis cerana indica* D) *Apis florea*
12. ----- is commonly known as little bee  
A) *Apis mellifera* B) *Apis dorsata* C) *Apis cerana indica* D) *Apis florea*
13. Due to its ferocious nature -----, this bee species is not domesticated.  
A) *Apis mellifera* B) *Apis dorsata* C) *Apis cerana indica* D) *Apis florea*
14. ----- is an Indian bee species is popularly domesticated in India.  
A) *Apis mellifera* B) *Apis dorsata* C) *Apis cerana indica* D) *Apis florea*
15. Species construct hive in bushes is-----  
A) *Apis mellifera* B) *Apis dorsata* C) *Apis cerana indica* D) *Apis florea*
16. Species construct hive on tall plants, building is-----  
A) *Apis mellifera* B) *Apis dorsata* C) *Apis cerana indica* D) *Apis florea*
17. ----- bee is the smallest honeybee.  
A) *Apis mellifera* B) *Apis dorsata* C) *Apis cerana indica* D) *Apis florea*
18. Body of honey bee is divided into -----regions  
A) 1 B) 2 C) 3 D) 4
19. Thorax of honey bee is divided into -----regions  
A) 1 B) 2 C) 3 D) 4
20. Head of Honey bee bears a pair of----- antennae.  
A) Filiform B) Thoracic C) Four D) Genuiculate
21. The pollen basket is present on----- leg.  
A) Prothoracic B) Mesothoracic C) Metathoracic D) All
22. Head bears .....ocelli (simple eyes) on top portion which perceive degree of light.  
A) 4 B) 3 C) 2 D) 1
23. Mouth parts of worker bees are modified for.....  
A) sucking and lapping B) Biting and Chewing C) Grasping D) Biting
24. Prothoracic legs serve as.....  
A) Collecting Honey B) antenna cleaner C) Digging D) brushes for cleaning

25. On ----- legs, bushy tarsi serve as brushes for cleaning of thorax  
A) Prothoracic B) Mesothoracic C) Metathoracic D) All
26. Series of upturned hooks are present on front margin of each hind wing called.....  
A) Spur B) Spines C) Spatula D) Hamuli
27. In adult workers abdomen appears----- segmented.  
A) 8 B) 6 C) 4 D) 2
28. Abdomen of honey bee bears .....  
A) sting B) wax glands C) scent glands D) All of these
29. In workers egg laying apparatus is modified into.....  
A) Sting B) ovipositor C) Scent glands D) All of these
30. In Queen bee egg laying apparatus is called.....  
A) Sting B) ovipositor C) Scent glands D) All of these
31. Reproductive organs are fully developed in.....  
A) Queen B) Drone C) Both in queen and drone D) worker
32. Reproductive organs are greatly reduced in.....  
A) Queen B) Drone C) Both in queen and drone D) worker
33. Duty of workers.....  
A) Cleaning of the hive and feeding of larvae B) Raising queen and cells when required  
C) Ventilate hive, guard the hive entrances, and construct the combs D) All of these
34. Duty of Queen bee.....  
A) Cleaning of the hive and feeding of larvae B) Raising queen and cells when required  
C) Ventilate hive, guard the hive entrances, and construct the combs D) None of these
35. The antenna cleaner is present on----- leg  
A) Prothoracic B) Mesothoracic C) Metathoracic D) All
36. The pollen spur is present on -----leg  
A) Prothoracic B) Mesothoracic C) Metathoracic D) All
37. The sting apparatus is absent in----  
A) Worker B) Queen C) Drone D) All
38. ----- bee is called as sterile female



A) Worker B) Queen C) Drone D) All

39. .... bee is called as nurse bee.

A) Worker B) Queen C) Drone D) All

40. The unfertilized eggs are laid in .....

A) Queen cell B) Drone cell C) Worker cell D) Honey cell

41. The location of drone's pupal eye is.....

A) Far apart B) Nearer C) Laterally D) Ventrally

42. Worker bees eye are .....

A) Far apart B) Nearer C) Laterally D) Ventrally

43. The colony of honey bees is.....

A) Monomorphic B) Polymorphic C) Dimorphic D) All three

44. .... bee provides the cohesive force to the colony

A) Worker B) Drone C) Queen D) All

45. Life span of drone is .....

A) Two to four weeks B) Twelve to Sixteen weeks C) Seven to nine weeks D) Six to seven years

46. Life span of Queen is .....

A) Two to four weeks B) Twelve to Sixteen weeks C) Seven to nine weeks D) Three to five years

47. ....invented the bee language.

A) Aristotle B) Mendel C) Karl von Frisch D) Fleming

48. When conditions in hive are optimum, then bees perform .....dance.

A) Circular dance B) Wriggle dance C) DVAV D) Alarm dance

49. When colony is in danger worker bee performs.....

A) Circular dance B) wriggle dance C) DVAV D) Alarm dance

50. Number of flower visited per minute is called as.....

A) Foraging rate B) Seating speed C) Flowering rate D) Flowering speed rate.



## Answer Keys

Question No.	Key	Question No.	Key	Question No.	Key
1	D	22	B	43	B
2	B	23	A	44	C
3	D	24	B	45	B
4	C	25	C	46	D
5	C	26	D	47	C
6	B	27	B	48	C
7	A	28	D	49	D
8	C	29	A	50	D
9	B	30	B		
10	B	31	C		
11	A	32	D		
12	B	33	D		
13	B	34	D		
14	C	35	A		
15	D	36	A		
16	B	37	D		
17	D	38	A		
18	C	39	A		
19	C	40	C		
20	D	41	B		
21	c	42	A		



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Value added Course on Apiculture  
Marks List

SL.No	NAME OF THE STUDENT	Class	Marks Scored
1	Annarao Shrishail	B.Sc II	35
2	Abhishek Anil	B.Sc II	36
3	Kailash Shivappa	B.Sc II	38
4	Kallappa Ambadas Panchal	B.Sc II	32
5	Karabasappa Shivalingappa	B.Sc II	40
6	Karthik Vidyadhar	B.Sc II	42
7	Kashinath Sharanappa	B.Sc II	31
8	Nagaraj Saibanna	B.Sc II	32
9	Padmavati Mahaveer	B.Sc II	35
10	Rahul Mallinath	B.Sc II	36
11	S Prashantkumar Revappa	B.Sc II	37
12	Sudharani Gundappa	B.Sc II	38
13	Sunil Babu	B.Sc II	39
14	Viqar Ahmed Siddique	B.Sc II	40
15	Zaiba Safiya Zahiruddin	B.Sc II	41
16	Aisha bi Liyaqath Ali	B.Sc II	42
17	Asiyabegum Ghudusab	B.Sc II	43
18	Ahmed Gousesab Peerzade	B.Sc II	44
19	Ekbote Vikas Venkatesh	B.Sc II	45
20	Kamble Pooja Vyankat	B.Sc II	46
21	Ajeykumar Mahadev	B.Sc IV	40
22	Kousar Jahan Moinuddin	B.Sc IV	38
23	Nagaraj Shivasharanappa	B.Sc IV	35
24	Shireen Banu Maheboob	B.Sc IV	36
25	Ajaykumar Ambaraya	B.Sc IV	37
26	Bhagyashree Mahantayya	B.Sc IV	38
27	Chandrakant Shivalingappa	B.Sc IV	39
28	Manjunath Gunderao	B.Sc IV	40
29	Manoja Bhimashankar	B.Sc IV	41
30	Ramesh Prahladrao	B.Sc IV	42
31	Sundaramma Mallikarjun	B.Sc IV	43
32	Shagufta Begum	B.Sc IV	44
33	Vikas Vithal	B.Sc IV	45
34	Amol Rathod Thavaru	B.Sc IV	46
35	Kashinath Marabe	B.Sc IV	47
36	Tushar Sanjay Miskeen	B.Sc IV	40

37	Guttedar Shivarajkumar	B.Sc IV	40
38	Tathagath Prakash	B.Sc V	42
39	Bhushan Anantkumar	B.Sc IV	43
40	Dilshad Begum	B.Sc IV	44
41	Amar Shrishail	B.Sc VI	45
42	Asiya Anjum	B.Sc VI	46
43	Bhouramma Gundappa	B.Sc VI	47
44	Ambika Mahadev	B.Sc VI	40
45	Najma Begum	B.Sc VI	38
46	Jyoti Anandraya	B.Sc VI	37
47	Kasturi Shantappa	B.Sc VI	28
48	Laxmi Basavaraj	B.Sc VI	26
49	Lakshmikant Devendra	B.Sc VI	30
50	Mallikarjun Shivalingappa	B.Sc VI	31
51	Patne Ajit Kashiraya	B.Sc VI	32
52	Pooja Vishwanath	B.Sc VI	40
53	Shivasharan S. Almad	B.Sc VI	41
54	Shrikant Anandraya	B.Sc VI	42
55	Shivaraj Pandit Chavan	B.Sc VI	43
56	Togare Nagesh C.	B.Sc VI	42
57	Vijayalakshmi Mathapati	B.Sc VI	40
58	Dhanraj Siddramappa	B.Sc VI	32
59	Jeevan Baburao Sullad	B.Sc VI	38
60	Md Asif Ali Md Salauddin	B.Sc VI	35



HEAD

Dept Of Zoology  
A.V. Patil Degree College  
ALAND, Dist: Kalaburagi.



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**H.K.E. SOCIETY'S  
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ALAND**



**Report and Outcome Analysis**

**Name of the Course: Apiculture**

**Name of the Department: Zoology**

**Number of Student Enrolled: 60**

**BOS Meeting Date: 24.06.2019**

**Start Date of the Course:09.07.2019**

**End Date of the Course: 25.10.2019**

The Department of Zoology have conducted Value added course on Apiculture. For the students of B.Sc I, II & III Year from 09.07.2019 to 25.10.2019.

The course was about the core concept of Apiculture provide product such as honey and wax used commercially

The total 60 students were enrolled in this course and they got fundamental knowledge of about Honey Bees are responsible for pollination and thus help in increasing the yield of the several plants

Concourse concluded with final examination and certificate distributions.

**Outcome of the Course**

- 1) To inculcate importance of Apiculture in relation with entrepreneurship development.
- 2) To give students knowledge about various techniques of Apiculture and its marketing to make them self sustainable after graduation.
- 3) To teach techniques of construction of Bee Hives and its maintenance.
- 4) To teach students about Honey production and health related problems with Honey bees.





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ALAND**



NAAC B+ Grade

Estd.1980

**REGISTRATION FORM**

To,  
**The Principal/Head /VAC,Coordinator,**  
HKES's, AVP ASCC, Aland.

**Respected Sir,**

I hereby apply for the Value Added Course on "**Apiculture**" basis in response to your notice no.....Dated.....The requisite particulars are given below in the prescribed format.

**Personal Information:**

1. Name of the Student (in block letters):  
.....  
.....
2. Permanent address with pincode:  
.....  
.....  
.....
3. Register No. (Given by the University): .....Semester (Odd/Even) (tick)  
Year:.....
4. Date of birth (as per SSLC Marks card/Equivalent Certificate) 

	D	M	M	Y	Y	Y	Y
--	---	---	---	---	---	---	---
5. Category: GEN/SC/ST/OBC/ Differently able to (tick) Gender: Male/Female (tick)
6. Sub caste: ..... Religion: .....Nationality:  
.....
7. Choice of the VAC in the Department of : ..... Offering the VAC in  
year .....

**Signature of the Applicant**

The form has to be filled up by student and handed over to the Head of the Value Added Course Coordinator/Department within Seven days after the opening of VAC. Option once exercised cannot be changed after forwarding the list to the respective VAC Coordinator/Head of the department.



H.K.E. Society's

# A.V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE



ALAND Dist. Kalaburagi, Karnataka - 585 302

CERTIFICATE

## CERTIFICATE

This is to Certify that *Vignar Ahmad S.*  
of *B.Sc-II*..... Semester for the year *2019-20*  
has successfully completed the value added course in  
*Apiculture*..... we wish him/her for future endeavours

*[Signature]*  
IOPC Co-Ordinator

*[Signature]*  
Head of Dept.

*[Signature]*  
Principal



H.K.E.Society's

# A.V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE



ALAND Dist. Kalaburagi, Karnataka - 585 302

## CERTIFICATE

CERTIFICATE

This is to Certify that Amol Rathod  
of B.Sc-IV<sup>th</sup> Semester for the year 2019-2020  
has successfully completed the value added course in  
Apiculture we wish him/her for future endeavours

  
ICAC Co-Ordinator

  
Head of Dept.

  
Principal



H.K.E.Society's



# A.V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE



ALAND Dist. Kalaburagi, Karnataka - 585 302

CERTIFICATE

## CERTIFICATE

This is to Certify that Pooja Vishwanath  
of B.Sc-VI Semester for the year 2019-20  
has successfully completed the value added course in  
Apiculture we wish him/her for future endeavours

  
IQAC Co-Ordinator

  
Head of Dept.

  
Principal