

Letter No. 149/DZ(737)/BBAU/2021

Date- 24/2/21

### NOTICE

It is to inform to all concerned that the Department of Zoology is offering one optional paper under open elective course in 2<sup>nd</sup> semester (M.Sc. Zoology). Open Elective Paper can be opted under **Choice based Credit System** being followed by the University. Following teachers, Department of Zoology are student advisor for this course.

1. Prof. V. Elangovan
2. Dr. Venkatesh Kumar R.
3. Dr. Suman Mishra
4. Dr. Sandhya

**The paper is as under: -**

Sl. No.	Paper Code	Timing	Paper Name	Maximum Marks		Credit	No of Seats
				End Semester	Sessional		
1.	ZL(OE)- 02	09:30 AM to 10:30 AM	Economic Zoology	70	30	04	58

Students are required to give their application on email [headdaasbbau@gmail.com](mailto:headdaasbbau@gmail.com) latest by **31<sup>st</sup> March 2021** duly forwarded by Head of concerned Department.

**Copy to: -**

1. Dean Academic Affairs, BBAU.
2. All Deans/ Heads/ Coordinators, BBAU.
3. COE, BBAU.
4. Concerned faculty members, Department of Zoology
5. I/c University website for it uploading on the University website.
6. Notice Board.

  
विभा (Head)  
Department of Zoology  
प्राणि विज्ञान विभाग  
बी०वी०ए०यू०, लखनऊ-२२६ ०२५

  
विभा (Head)  
Department of Zoology  
प्राणि विज्ञान विभाग  
बी०वी०ए०यू०, लखनऊ-२२६ ०२५

- Preservation, staining, preparation of permanent slides and identification of collected trematode & cestode parasites.
- Study of different protozoan, trematodes, cestodes and nematodes from permanent slides.
- Microscopical Examination of blood smears for *Plasmodium* stages, *Leishmania* amastigotes, and microfilariae
- Collection from various hosts, preservation, mounting and identification of collected Nematodes

**Submission:** At least five permanent slides to be submitted at the time of practical examination

## ZL(OE)-02: Economic Zoology

### Unit 1: Apiculture

History & Classification, Biology of Honey Bees, Social Organization of Bee Colony (Queen, Drone, Worker). Economic Importance, Scope in Apiculture, Diseases & its control, Rearing of Bees, Bee Keeping Equipment. Bee Economy & Entrepreneurship in Apiculture.

### Unit 2: Aquaculture

Introduction to fresh water aquaculture, aquaculture systems, Integrated farming Systems; Paddy cum fish culture, poultry cum fish culture, poultry-piggery cum fish culture, Waste water fed aquaculture. Physico-chemical properties of soil and water, Productivity & nutrient quality & quantity of soil and water, Soil and water quality monitoring and management.

### Unit 3: Sericulture

Introduction to Sericulture, Types of mulberry and non-mulberry silkworms, Food plants of Silkworms. Different methods of Rearing, Diseases of silkworm and their control, Reeling methods. Economic income of Silk Industry.

### Unit 4: Vermicomposting

Earthworms, Ecological role and economic importance of earthworms. Vermiculture – definition, scope and importance; Environmental requirements; Culture methods, Vermicomposting – applications, Future perspectives, Potentials and constraints for vermiculture in India.

### Suggested Reading Materials:

- Prost, P. J. (1962). Apiculture. Oxford and IBH, New Delhi.
- Thomas PC, Rath SC & Mohapatra KD. 2003. Breeding and Seed Production of Finfish and Shellfish. Daya Publ.
- Edwards CA, Hendrix P and Arancon N (2014) Biology and Ecology of Earthworms, Springer Publishers.
- Edwards CA, Arancon NQ and Sherman RL (2011) Vermiculture Technology: Earthworms, Organic Wastes, and Environmental Management, CRC Press, USA.
- Ismail SA (2005) The Earthworm Book. Edition, Other India Press, Apusa, Goa, India.

Letter No. 150/DZ(738)/BBAU/2021

Date- 24/6/2021

**NOTICE**

It is to inform to all concerned that the Department of Zoology is offering one optional paper under Open Elective course in 2<sup>nd</sup> semester (B.Voc Live Stock Production and Management). Open Elective paper can be opted under **Choice Based Credit System** being followed by the University. **Dr. Neeshma Jaiswal**, Department of Zoology is student advisor for this course.

**The paper is as under:-**


Paper Code	Timing	Paper Name	Maximum Marks		Credit	No. of Seats
			End Semester	Sessional		
BVOCLPM(OE)-02	09:30 AM To 10:30 AM	Apiculture	70	30	04	20

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3. COE, BBAU.
4. Dr. Abha Mishra, Course Teacher.
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6. Notice Board.

  
विभाग (Head)  
Department of Zoology  
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बी०बी०ए०यू०, लखनऊ-२२६ ०२५

  
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बी०बी०ए०यू०, लखनऊ-२२६ ०२५



**Unit I: Introduction of Apiculture**

History, Classification and Biology of Honey Bees, Social Organization of Bee Colony (Queen, Drone, Worker).Economic Importance.Scope of Apiculture.

**Unit II: Rearing and Extraction**

Rearing of Bees, Artificial Bee rearing (Apiary) and appliances, Beehives Bee Pasturage, Selection of Bee Species for Apiculture, Bee Keeping Equipment, Methods of Extraction of Honey

**Unit III: Threat to Apiculture**

Diseases (Galleria and Mites) and Enemies, Control and Preventive measures, Conservation of Honey Bees. Foraging and communication behavior.

**Unit IV: Instrumentation & Practical aspects**

Preparation of honey bee boxes. Extraction of honey and venom, Purification of honey,Apparatus of honey bee, Identification of components of life cycle of honey bee Mouth Parts, Pollen Basket preparation