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Central University of Himachal Pradesh

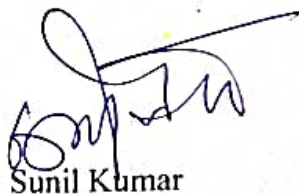
(Established under Central Universities Act 2009)  
Dharamshala (HP) - 176215

Dated: 12.07.22

**Department of Animal Sciences**  
**School of Life Sciences**

Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled "**Traditional and medicinal uses of Animals and their parts in Karsog division of Mandi district, (H.P)**" submitted by **Pooja Thakur (CUHP20ZOO20)** D/o **Dharam Singh** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

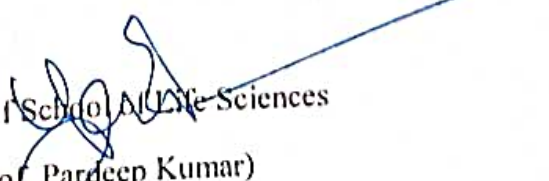
  
Dr. Sunil Kumar

Supervisor

Dr.   
External Examiner  


  
Head of the Department

(Dr. Sunil Kumar)

Dean of School of Life Sciences  
  
(Prof. Pardeep Kumar)



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**School of Life Sciences**  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India]- 176215

This is certify that the dissertation entitled “**Study on Distribution Pattern of Macro-benthos diversity in relation to nutrients of Pong Reservoir, Kangra (H.P)**” submitted by **Anshuta Sharma (CUHP20ZOO05)** D/o Sh. Shyam Lal to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Sunil Kumar  
Supervisor

  
Dr. ....  
External Examiner

  
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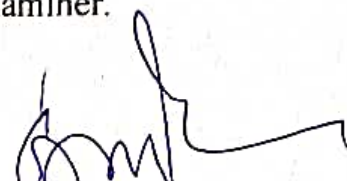
CERTIFICATE

Dated: 12-1-22

Department/Centre  
School of Life Sciences

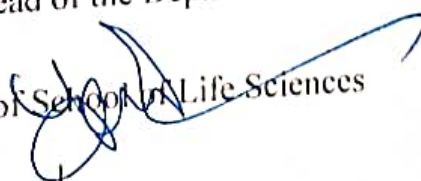
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] – 176215

This to certify that the dissertation entitled “Length-weight relationship of selected fish species from Gobind Sagar reservoir ,Bilaspur(H.P)” submitted by Harsita mehta (CUHP20ZOO11) D/o/ S/o Sh. Subhash chand to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Sunil Kumar  
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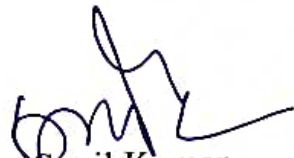
CERTIFICATE


Dated: 12/07/22

Department Animal science  
School of Life Sciences

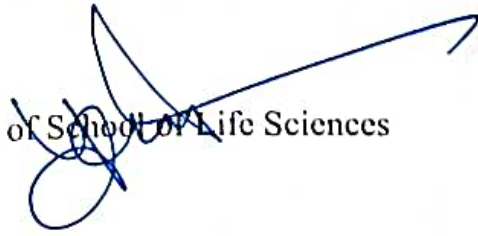
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled "Survey on pollinator insects of Shahpur, District Kangra with special reference to mango pollinators" submitted by Meenakshi (CUHP20ZOO17) D/o Sh. Kuldeep Kumar to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Sunil Kumar  
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**Central University of Himachal Pradesh**  
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Dharamshala (HP) - 176215

**CERTIFICATE**

Dated: 12-07-2022

**Department of Animal Sciences**  
**School of Life Sciences**  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled “**Ethnozoological study on use of animal and animal derived products in traditional medicine in Arki area of district Solan, Himachal Pradesh**” submitted by **Akriti Sharma (CUHP20ZOO02) D/o Jai krishan** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
**Dr. Sunil Kumar**  
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Department of Animal sciences

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Dharamshala, District Kangra,

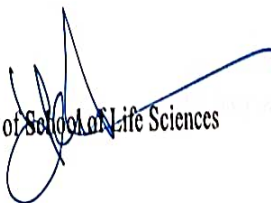
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled "An Astounding Biodiversity of Butterflies in Shahpur area of Kangra district, Himachal Pradesh" submitted by Banwari Yadav (CUHP20ZOO08) S/o Shri Shyoji Lal Yadav to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
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Dharamshala (HP) - 176215

**CERTIFICATE**

Dated: 12 July 22

**Department/Centre**  
**School of Life Sciences**  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled “ **Analysis of Water Quality of Manuni Stream**” submitted by **Manshi Choudhary**(CUHP20ZOO14) D/O Shri Ram Pal to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

Dr.....  
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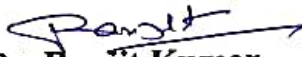
Central University of Himachal Pradesh, Dharamshala

[Established under the Central Universities Act 2009]

Dharamshala, District Kangra,


Himachal Pradesh [India]- 176215

This is to certify that the dissertation entitled “**Analysis of Physiochemical Properties and Microbial Diversity of Water bodies from Chhatri, Kangra (H.P.)**” submitted by **Chetna (CUHP20Z0009)** D/o **Surender Singh** to the Central University of Himachal Pradesh, Dharamshala in partial fulfilment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
**Dr. Ranjit Kumar**  
Supervisor

  
External Examiner

  
Head of the Department

  
Dean of School of Life Science





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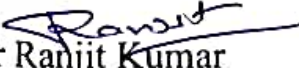
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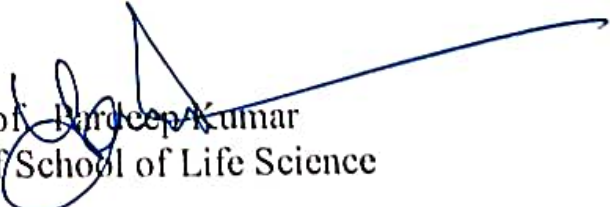
Himachal Pradesh [India]- 176215

This is to certify that the dissertation entitled “**To study weight loss of different pulses by *Callosobruchus chinensis* and their biopesticidal management**” submitted by **Anuradha Rani** (CUHP20ZOO06) D/o Naresh Kumar to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr Ranjit Kumar  
Supervisor

  
Dr.....  
External-Examiner

  
Dr. Sunil Kumar  
Head of the Department

  
Prof. Hardeep Kumar  
Dean of School of Life Science



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Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This is to certify that the dissertation entitled “**To evaluate role of yeast on growth of wheat plant**” submitted by **Kanupriya (CUHP20ZOO12)** D/o/ .Mr. Prakash Chand the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr..Ranjit Kumar.  
Supervisor

  
Dr. Sunil Kumar

Head of the Department

Dean of School of Life Sciences

  
External Examiner



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय  
Central University of Himachal Pradesh  
(Established under Central Universities Act 2009)  
Dharamshala (HP) - 176215

## CERTIFICATE

Dated: 12-7-22

**Department of Animal Science**  
**School of Life Sciences**  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] – 176215


This to certify that the dissertation entitled “**To study Morphological characteristics and growth of *Lactobacillus* in different pH**” submitted by **Samriti negi** (CUHP20ZOO24) D/o/ .Mr. Goverdhan Dutt. to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Ranjit Kumar.  
Supervisor

  
External Examiner  
12/7/22

  
Dr. Sunil Kumar

Head of the Department

Dean of School of Life Sciences  






हिमाचल प्रदेश केंद्रीय  
विश्वविद्यालय

Central University of Himachal  
Pradesh  
(Established under Central Universities Act  
2009)

Dharamshala (HP) - 176215


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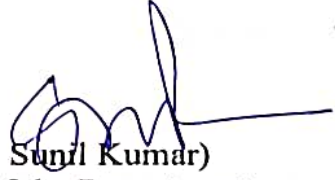
**Department of Animal Sciences**  
**School of Life Sciences**  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

Dated: 12-07-2022

This is to certify that the dissertation entitled "**Comparison of Diversity and Growth Pattern of *Lactobacillus* from Curd and Buttermilk**" submitted by **Anjali Kumari (CUHP20ZOO03)** D/o Raj Singh to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Ranjit Kumar  
Supervisor

  
Dr.....  
External Examiner

  
(Dr. Sunil Kumar)  
Head of the Department

  
(Dr. Pardeep Kumar)  
Dean of School of Life Sciences



**हिमाचल प्रदेश केंद्रीय विश्वविद्यालय**  
**Central University of Himachal Pradesh**  
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Dharamshala (HP) - 176215

**CERTIFICATE**

Dated: 12-07-22

**Department of Animal Sciences (Zoology)**  
**School of Life Sciences**  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

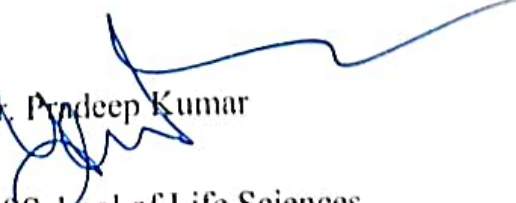
This is to certify that the dissertation entitled “**To study comparative pH tolerance of *Lactobacillus* isolated from curd and lassi**” submitted by Ms. Mansi Pathania (CUHP20ZOO15) D/o Mr. Sanjeev Pathania to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Ranjit Kumar  
Supervisor

  
Dr. Sunil Kumar

  
Dr.....  
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Dr. Pradeep Kumar  
Dean of School of Life Sciences



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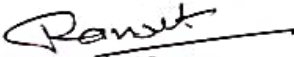
Dharamshala (HP) - 176215

**CERTIFICATE**

Dated: 12 JULY 2022

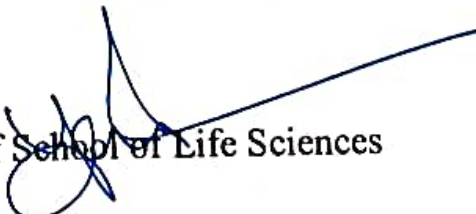
**Department of Animal Science (Zoology)**  
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Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India]- 176215

This is to certify that the dissertation entitled “**Microbial Diversity in Different Water Sources of Kangra District**” submitted by **Rajat Bhatia (CUHP20ZOO21)** S/o Sh. Ravinder Kumar to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Ranjit Kumar  
Supervisor

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Dharamshala (HP) – 176215

## CERTIFICATE

Dated: 12 July 2022

**Department of Animal science**

**School of Life Sciences**

Central University of Himachal Pradesh, Dharamshala

[Established under the Central Universities Act 2009]

Dharamshala, District Kangra,

Himachal Pradesh [India] – 176215

This to certify that the dissertation entitled “Effect of earthworm species on the physico-chemical properties of soil in District Kangra” submitted by Sneha Thakur (CUHP20ZOO27) D/o Rakesh Kumar to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

Dr. Reshma Sinha

Supervisor

Dr. ....

External Examiner

Head of the Department

Dr. Sunil Kumar

Dean of School of Life Sciences

Prof. Pardeep Kumar



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

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**Department of Animal Science**

**School of Life Sciences**

Central University of Himachal Pradesh, Dharamshala

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Dharamshala, District Kangra,

Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled “**Earthworm diversity near Shahpur region of District Kangra (H.P.)**” submitted by **Sonia Thakur (CUHP20ZOO29) D/O Kheema Ram** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

**Dr. Reshma Sinha**

Supervisor

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Head of the Department

(Dr. Sunil Kumar)

Dean of School of Life Sciences

(Prof. Pardeep Kumar)



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Dharamshala (HP) - 176215

CERTIFICATE

Dated: 14<sup>th</sup> July 2022

Department of Animal Sciences

School of Life Sciences

Central University of Himachal Pradesh, Dharamshala

[Established under the Central Universities Act 2009]

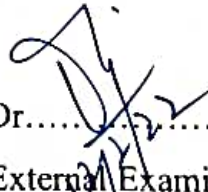
Dharamshala, District Kangra,

Himachal Pradesh [India]– 176215

This to certify that the dissertation entitled “**Assessment of Microplastic in soil sample from district Kangra, Himachal Pradesh.**” submitted by Yogita (CUHP20ZOO33) D/o **Sh. Kartar singh** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Reshma Sinha

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Central University of Himachal Pradesh, Dharamshala

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Dharamshala, District Kangra,

Himachal Pradesh [India] – 176215

This is to certify that the dissertation entitled “**Identification and Quantitation of Microplastics in Water Bodies of Kangra District of Himachal Pradesh.**” submitted by **Sangeeta (CUHP20ZOO25)** D/o Sh. Ashok Kumar to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

Dr. Reshma Sidha

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**CERTIFICATE**


Dated: 18-7-2022


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**School of Life Sciences**  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled "**Biology of tobacco caterpillar (*Spodoptera litura*) on French bean and Amaranth**" submitted by **Mrinal (CUHP20ZOO18) D/o/ Sh. Sunil Dutt and Smt. Manju Kumari** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.


  
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CERTIFICATE

Dated : 19 July 2022

Department of Animal Sciences  
School of Life Sciences  
Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled “Evaluating the effects of two agricultural pesticides on mosquito larvae” submitted by Sujeta Kumari (CUHP20ZOO30) D/o/ Shakeen Chand to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

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Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled “**Anthropogenic Impact of Habitat Ecological Parameters on Plankton Diversity in Pong Reservoir, Kangra (HP)**” submitted by **Deeksha Thakur** (CUHP20ZOO10) D/o Sh. Kashmir Singh Thakur to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

Dr. Amit Kr. Sharma  
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Head of the Department

Dean of School of Life Sciences





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Dated: 12.07.22

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Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled "A Study on Physico-Chemical and Biological Parameters of Selected Pond Water Bodies at Shahpur, Kangra (HP)" submitted by Manveen Kaur (CUHP20ZOO16) D/o Kamaljit Singh to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

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Himachal Pradesh [India] - 176215

This to certify that the dissertation entitled “Assessment of Physico-Chemical and Microbial Properties of Ice Used for Various Purposes in Kangra City (HP)” submitted by Saloni (CUHP20ZOO23) D/o Sh. Vijay Kumar to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

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This to certify that the dissertation entitled **“Population Status of Water Dependent Birds in Pong Wetland at District Kangra (HP)”** submitted by **Shilpa Devi (CUHP20ZOO26) D/o Sh. Vishnu** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

**Dr. Amit Kr. Sharma**  
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Himachal Pradesh [India] – 176215

This to certify that the dissertation entitled “**Population Dynamics of Selected Endemic Fish Species in Pong Reservoir, Kangra (HP)**” submitted by **Tripta Devi (CUHP20ZOO31) D/o: Om Parkash** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

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Himachal Pradesh [India] – 176215

This to certify that the dissertation entitled “Status and Diversity of Birds in Kangra and Chamba District of Himachal Pradesh” submitted by Vineet Singh (CUHP20ZOO32) S/o Sh. Charan Das to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

Dr. Amit Kr. Sharma  
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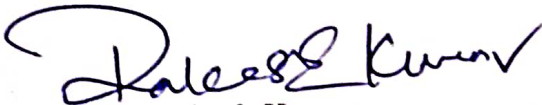
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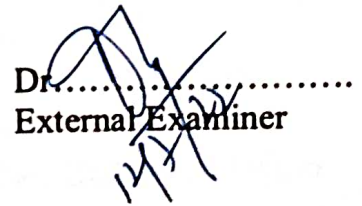
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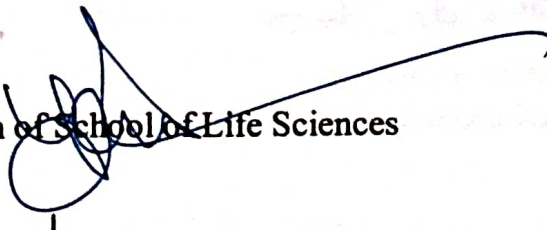
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Himachal Pradesh [India] – 176215

This to certify that the dissertation entitled “Water Quality Assessment of Two Major Tributaries of River Beas (Baner and Gaj)” submitted by Ankita (CUHP20ZOO04) D/o Sh. Kalyan Singh to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Rakesh Kumar  
Supervisor

  
Dr.....  
External Examiner

  
Head of the Department

  
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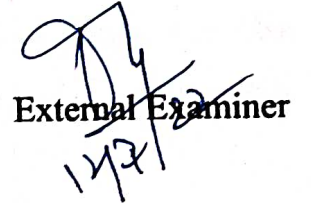
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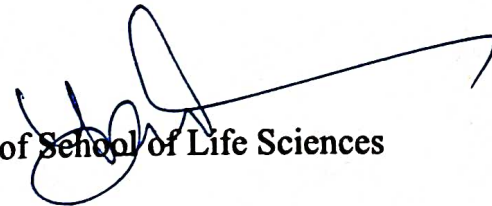
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[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] – 176215

This to certify that the dissertation entitled “**Histopathological study on the gills of predatory fish *Xenentodon cancila* infected by *Eustrongylides excisus* larvae** submitted by **Sonia** (CUHP20ZOO28) D/o Hira Lal to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
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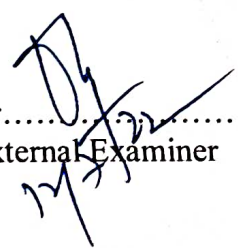
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**Department of Animal Sciences**  
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Central University of Himachal Pradesh, Dharamshala  
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This to certify that the dissertation entitled “**Water quality status of river Ravi at Chamba(HP)**” submitted by **Rashi Kapur (CUHP20ZOO22)** D/o/ S/o Sh Sanjay Kapur to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

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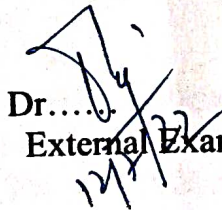
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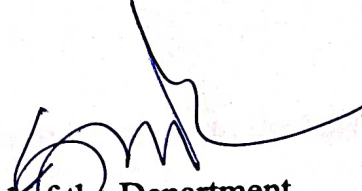
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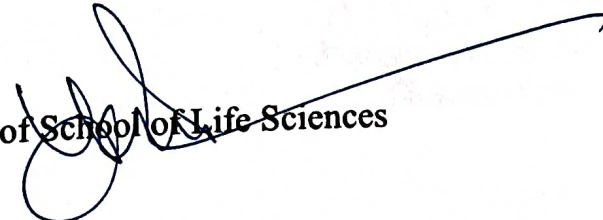
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This to certify that the dissertation entitled “A Survey of Cage culture site at Pong Reservoir ” submitted by **Arti Guleria (CUHP20ZOO07)** D/o/ Mr. Surinder Singh to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
Dr. Rakesh Kumar  
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This to certify that the dissertation entitled “**Biology, Morphometry and Potent Biopesticide Activity of *Roylea cinerea* against *Plutella xylostella* L. (Diamondback moth)**” submitted by **Aakash Rathour (CUHP20ZOO01)** S/o Lekh Raj to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

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Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
Dharamshala, District Kangra,  
Himachal Pradesh [India] - 176215

This is to certify that the dissertation entitled “**Study of Biology and Bio-management of *Tuta absoluta***” submitted by Namita Sharna (CUHP20ZOO19) D/o Vinod Kumar to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

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Dr.....  
External Examiner

(Dr. Sunil Kumar)

Head of the Department

(Dr. Pardeep Kumar)

Dean of School of Life Sciences





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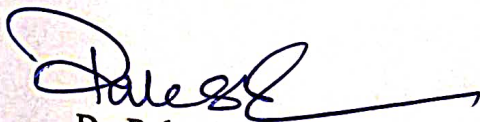
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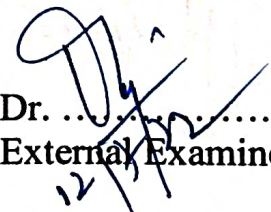
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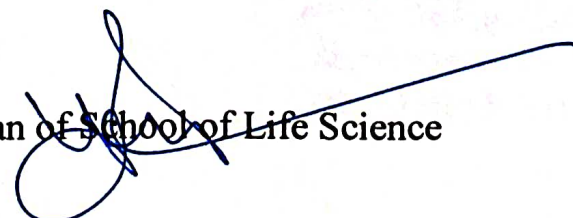
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This to certify that the dissertation entitled “**Food and Feeding Habits of *Tor putitora* and *Schizothorax richardsonii* Fish Species in Beas River at Mandi (HP)**” submitted by **Manish Sharma(CUHP20ZOO13)**S/o **Brij Kishor** to the Central University of Himachal Pradesh, Dharamshala in partial fulfillment of the requirements for the award of degree of Master of Science in Zoology has been approved by the committee after an oral examination of the student in collaboration with an External Examiner.

  
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