



**Shivaji College**  
UNIVERSITY OF DELHI  
ACCREDITED BY NAAC WITH 'A' GRADE



भारत 2023  
INDIA 2023

**SHIVAJI COLLEGE  
(UNIVERSITY OF DELHI)**

**DETAILS OF THE EVENT**

<b>TITLE OF THE EVENT:</b>	Visit to Forest/ Zoological Park to study and record the behavioural activities of animals and prepare a short report
<b>DATE AND TIME:</b>	15.04.2024 at 9:00 am
<b>NATURE:</b>	OFFLINE ✓
<b>VENUE:</b>	National Zoological Park, New Delhi
<b>DEPARTMENT/COMMITTEE/SOCIETY:</b>	Department of Zoology
<b>TIC/CONVENER NAME:</b>	Prof. Sunita Gupta
<b>NUMBER OF PARTICIPANT:</b>	13
<b>FINANCIAL ASSISTANCE (IF ANY):</b>	NO ✓
<b>(i) Amount:</b>	
<b>(ii) Funding agency details:</b>	

**BRIEF WRITEUP ABOUT THE INVITED SPEAKER(S)- NA**

NAME & DESIGNATION	AFFILIATION	PHOTO

<b>LEARNING OBJECTIVES:</b>	To study the behavior of animals by actual observation in wild or captivity
<b>OUTCOME:</b>	The students were able to observe the animals in captivity and compare them with wild to see how the captivity dulls their wild instincts and survival mode. They cannot survive in the wild.



BRIEF REPORT OF THE EVENT:

THE REPORT MUST INCLUDE THE FOLLOWING DOCUMENTS AND PROOF IN THE GIVEN ORDER:

1.	Permission letter (Duly signed) pg 1
2.	Poster/invites - NA
3.	Photos(geotagged) - pg 3.
4.	Link of video clip (If any)
5.	Attendance sheet with signatures of all attendees (mandatory) pg 4
6.	Feedback form and analysis pg 4
7.	MoU/ Collaboration Proof (If any) - NA
8.	Media coverage (Digital/Print/None)-Nil
9.	Event completion report (Duly signed)-Nil
10.	Financial assistance/sponsorship proof (If any)-NA
11.	A scan of blank certificate, if given to participants / winners-Nil
12.	Any other document

(For Office use only)

IQAC Document No:	IQAC/SH/2023-2024/ Society/Dept./Committee /
IQAC file No:	SH/2023-24/

**TICK MARK (✓): The relevant NAAC criteria pertaining to the event.**

Criterion I	Curricular Aspects (planning & Implementation)	Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation	Criterion VI	Governance
Criterion III ✓	Research, Innovations & Extension	Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure		

  
TIC/CONVENER  
(NAME & SIGNATURE)

  
7/11/24.  
IQAC COORDINATOR  
(SIGNATURE)



The Principal.  
Shriyaji College  
University of Delhi  
Raja Garden  
New Delhi - 110027

P/1943/24  
09/04/24

Date: 09/04/24

A.O. A.C.  
P. Singh  
10/4/24

Subject: Permission for educational visit to Delhi Zoological Park for observation of wild animals and their behaviour for B.Sc(H) Zoology semester IV and VI as per their syllabus.

Respected Sir,

As per the syllabus of B.Sc(H) Zoology semester VI (Wild life conservation and Management) and semester IV (Animal Behaviour) the students need to visit Delhi Zoological to observe wild animals and their behaviour and submit a report. We want to plan a trip to the Zoo on 15<sup>th</sup> April, 2024 and will be accompanied by Dr. Aeshna Nigam, Dr. Rakesh Roshan and Dr. Saumya Das. No financial assistance to be availed from college. We will be obliged if you grant us permission for the trip.

Thanking You.

Yours sincerely,

Aeshna Nigam

[DR. AESHNA NIGAM] [DR. RAKESH ROSHAN] [DR. SAUMYA DAS]

forwarded  
Junita  
[Prof. Junita Gupta]  
TIC

Saumya Das

No financial assistance should be provided as permission may be granted.  
Bhaskar 12/4/24



## DISCIPLINE SPECIFIC CORE COURSE- 12:

### Animal Behaviour Zoo-DSC-12

#### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical		
Animal Behaviour Zoo-DSC- 12	04	02	Nil	02	Passed Class XII with Biology/ Biotechnology	NIL

#### Learning Objectives

The learning objectives of this course are as follows:

- To provide an overview of animal behaviour in a scientific study of the wild and the wonderful ways in which animals interact with each other, with other living beings, and with the environment.
- to understand and appreciate different types of animal behaviour, their adaptive and evolutionary significance.
- to equip the students with an ability to pursue career in behavioural ecology other related areas.
- to apprise the students of the versatility of Animal behaviour and its crosstalk among conservation biology, molecular biology, behavioural ecology and integrated pest management.

#### Learning Outcomes

By studying this course, students will be able to:

- comprehend various types of animal behaviour and their importance.
- observe, analyse, interpret and document the different types of behaviour.
- enhance their skills by taking short projects pertaining to Animal behaviour.
- appreciate and develop passion to biodiversity; and respect the nature and environment.
- better understand and relate the fundamentals and advanced concepts so as to develop a strong foundation that will enable them to acquire skills and knowledge.

#### SYLLABUS OF DSC-12

##### UNIT- I Introduction to Animal Behaviour

4 hrs

Origin and history of ethology; Pioneers of modern ethology: Karl von Frisch, Ivan Pavlov, Konrad Lorenz, Niko Tinbergen; Proximate and ultimate causes of behavior.

*Reshmi Nigam*



**UNIT- 2 Mechanisms of Behaviour****5 hrs**

Innate behaviour, Instinct, Stimulus filtering, Sign stimuli, Code breakers.

**UNIT- 3: Patterns of Behaviour****5 hrs**

**Orientation:** Primary and secondary orientation; Kinesis - orthokinesis, klinokinesis;

**Taxis:** tropotaxis and klinotaxis, menotaxis (light compass orientation).

**Learning:** Associative learning, Classical and operant conditioning, Habituation, Imprinting;

**Reasoning:** Intelligence and artificial intelligence.

**UNIT- 4: Communication****3 hrs**

Importance of communication; Role of Tactile, Chemical, Auditory, Visual stimuli in communication.

**UNIT- 5: Social Behaviour****4 hrs**

Concept of Society; Insects' society; Honey bee: Society organization, polyphenism and polyethism; Foraging in honey bee, round dance, waggle dance; Experiments to prove distance and direction component of dance; Formation of new hive/queen.

**UNIT- 6: Altruism****3 hrs**

Altruism, Inclusive fitness, Hamilton's rule

**UNIT 7: Sexual Behaviour****6 hrs**

Asymmetry of sex; Sexual dimorphism, mate choice; Intra-sexual selection (male rivalry); Inter- sexual selection (female choice); Courtship behaviour, Courtship behavior in 3-spine stickleback; Infanticide; Parental care, sexual conflict in parental care.

**Practical****(60 hrs)****(Laboratory periods: 15 classes of 4 hours each)**

1. Tools, techniques and methods used in studying animal behavior.
2. To study nests and nesting behaviour of the birds and social insects.
3. To study the behavioural responses of wood lice to dry and humid conditions.
4. To study geotaxis behaviour in earthworm.
5. To study the phototaxis behaviour in insect larvae.
6. To study different types of animal behaviour such as habituation, social life, courtship behaviour in insects and birds, and parental care from short videos/movies. At least two videos for each behaviour.
7. Construction of ethogram using suitable data to study animal behaviour.
8. Visit to Forest/Wild life Sanctuary/Biodiversity Park/Zoological Park to study and record the behavioural activities of animals and prepare a short report.

*Asst. Prof. Nigam*



## Report on visit to Zoological Park

### Visit to National Zoological Park B.Sc.(H) Zoology Semester IV Animal Behaviour

The students of B.Sc. (H) Zoology semester IV of Shivaji College, University of Delhi along with teachers Dr. Aeshna Nigam and Dr. Rakesh Roshan and Dr. Samya Das went for an educational tour to National Zoological Park, New Delhi on 15.4.2024. The visit was a part of the curriculum of the paper Animal Behaviour. This was an exercise which helped students to practically observe the behavioral changes observed due to animals held captive. Captivity tends to dull the instincts of the animals which are very important for survival in the wild. The animals in zoo are provided with food daily at the same time so there was no competition or exhibition of predator prey interaction. Moreover, since single or two members of a species were kept together social behavior was not apparent. Understanding the behavior also helps in conservation efforts specifically for breeding and propagation of endangered animals. Few of the animals observed were crocodile, gharial, hooting monkey, white tiger, lion, Asiatic and African elephants, black swan, peacock, silver pheasant and many more. Since it was summer so the snakes were out of hibernation and they observed python, Indian cobra and others.



*Aeshna Nigam*





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## ATTENDANCE and FEEDBACK FORM

TITLE OF THE EVENT: Visit to Delhi Zoological Park

DATE OF THE EVENT: 14.4.2024

NAME OF THE DEPARTMENT: Zoology (B.Sc. H Zoology, Semester IV)

NAME OF THE EVENT COORDINATOR: Dr. Aeshna Nigam

S.NO	STUDENT NAME	ROLL NO.	Attendance (Signature)	FEEDBACK
✓ 1.	Nidhee Kumari	22/22011	Nidhee Kumari	learned a lot, great experience. Nidhee Kumari
✓ 2.	Priyaranjan	22/22023	Priyaranjan	Trip was really beautiful, learned a lot from
✓ 3.	Savali	22/22017	Savali	Excellent visit, learned a lot from
✓ 4.	Vivek Singh	22/22019	Vivek Singh	Learned more about animals behavior. Vivek Singh
✓ 5.	Muskan Gupta	22/22033	Muskan	Knowledgeable and Informative trip. Excellent experience Muskan
✓ 6.	Saheli Karan	22/22031	Saheli	Informative trip, Saheli
✓ 7.	Sonam Singh	22/22034	Sonam	Very serene environment. Informative trip. Sonam
✓ 8.	Saana J.K	22/22018	Saana	It is Informative to know the behavior of <del>the</del> Disolated wild animal

Teachers' Signature

*[Signature]*

*[Signature]*

(4)





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9.	Purvi Gang	22/22024	Purvi	Great Experience	Purvi
10	Bhawika Yadav	22/22004	Purvi	good	Purvi
11	Purvi gang	22/22005	Purvi	It was a great experience	Purvi
12	Tushar Goswami	22/22032	Purvi		
13	Harshal Gupta	22/22006	Harshal Gupta	Amazing	Harshal Gupta
14					
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22					

Teachers' Signature

Purvi

Harshal Gupta