

As Per NEP 2020

University of Mumbai



Syllabus for Basket of Basket of Open Elective (OE)	
Board of Studies in Zoology	
UG First Year Programme	
Semester - I	
Title of Paper	Credits 2/ 4
I) Amazing Animals	2
From the Academic Year	2024-25

OE1: Amazing Animals

Sr. No.	Heading	Particulars
1	Description the course:	This course enables the learners to comprehend the aspects of animal behavior including animals as architects of nature and amazing features of animal adaptations.
2	Vertical :	Major/Minor/Open Elective /Skill Enhancement / Ability Enhancement/Indian Knowledge System (Choose By √)
3	Type :	Theory
4	Credit:	2 credits (1 credit = 15 Hours for Theory in a semester)
5	Hours Allotted :	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: The course is designed to, CO 1. Orient learners towards the fascinating world of animals. CO 2. Orient learners towards animals as architectures of nature. CO 3. Acquaint learners to the defense mechanisms and special features of animals.	
8	Course Outcomes: Upon completion of the course, the learners should be able to: OC 1. Appreciate the fascinating world of animals. OC 2. Understand the role of animals as architectures of nature. OC 3. Comprehend the animal unique features and defense mechanisms in animals.	

OE1: Amazing Animals

9	Module 1: Animal Architects	15hr
	1.1 Animal architects of nature a) Insects that use mud to build nest: Termites, Mud Dauber Wasp and Harvester Ant. b) Birds that weave nest: Baya weaver bird, Tailor Bird. c) Animals that use saliva and foam to build nest: Betta fish, White- nest Swiftlet, Foam-nest tree frog. d) Burrowing animals: Porcupine. e) Animals using twigs and feathers: Garden warbler and Eider duck. f) Cavity nester birds: Hornbill, Barbet. g) Animals that uses wax: Honey bees. h) Web weaving: orb-weaver spider.	15hr
	Module 2: Marvels of the animal world	15hr
	2.1 Defense and escape behaviors in animals a) Spraying toxicant: Bombardier beetle b) Spitting Venom: Spitting Cobra. c) Slime production: Hag Fish. d) Evisceration: Sea Cucumber e) Flying Fish f) Camouflage: Chameleon, Nightjar g) Squirt Blood: Phrynosoma	07hr
	2.2 Unique features in animals a) Regeneration in Starfish and Wall lizards b) Armor of Scales: Pangolin and Armadillo c) Fastest Punch: Mantis Shrimp. d) Echolocation: Bats and Whales. e) Mimicry: Oak leaf Butterfly, Orchid Mantis. f) Parental Care: Caecilian, Scorpion. g) Whiptail shark (<i>Alopias pelagicus</i>)	08hr
	* Suggested topics for assignment: Documentation of animal behavior in their surrounding; Visit to nearby zoo, wildlife reserve, etc.; Prepare report on behavior or special features of preserved animals specimen available in the laboratory; any other topic relevant to the syllabus deemed fit by the facilitator.	

10.	Text Books: 1. Dalvie, V.V., Raje, G.B., Sardesai, P., Prabhu, N.S., (2015). Wonders of the Animal World. University of Mumbai Press. 2. Arndt, I., Tautz, J., Brandenburg, J., Harris, M., & Grentz, H. (2013). Animal architecture. 3. Mandal, F. B. (2015). Textbook of animal behaviour. PHI Learning Pvt. Ltd. 4. Wilsdon, C. (2014). Animal defenses. Infobase Publishing. 5. Kaner, E. (1999). Animal defenses: How animals protect themselves. Kids Can Press Ltd.
11.	Reference Books: 1. Hansell, M. (2007). Built by animals: the natural history of animal architecture. OUP Oxford. 2. Robinson, W. W. (1999). How Insects Build Their Amazing Homes, Blackbirch Press. 3. Goodfellow, P. (2011). Avian architecture: How birds design, engineer, and build. Princeton University Press. 4. Krause, J., James, R., Franks, D. W., & Croft, D. P. (Eds.). (2015). Animal social networks. Oxford University Press, USA. 5. Shackelford, T., & Vonk, J. (2017). Encyclopedia of Animal Cognition and Behavior. 6. Abberley, W., Alt, C., Higgins, D., Huggan, G., & Marland, P. (2022). Modern British Nature Writing, 1789–2020: Land Lines. Cambridge University Press. 7. Stevens, M. (2021). Life In Colour- How Animals See the world. Ebury Publishing.

12	Internal Continuous Assessment: 40% (20 marks)	External, Semester End Examination: 60% Individual Passing in Internal and External Examination (30 marks)
13	Continuous Evaluation through: Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.(at least 3)	As per paper pattern 01.00 hour
14	Format of Question Paper: for the final examination	
	Time 1.0 Hr	Max. Marks 30
	Q.1. Questions in the form of MCQ and answer in one sentence. (Overall equal weightage for both modules I & II) Q1a. Five questions in the form of MCQ (5 marks) Q1b. Five questions of answer in one line (5 marks)	10
	Q.2 Answer any one of the following (based on Module I) a. b.	06
	Q.3. Answer any one of the following (based on Module II) a. b.	06
	Q4. Write short note any two of the four from module I and II (equal weightage) a. b. c. d.	08

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