ST. JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS) VISAKHAPATNAM

III SEMESTER   **ZOOLOGY** TIME:2HRS/WEEK

Z-Ma4-3551(2) **EVOLUTION AND ZOOGEOGRAPHY** MARKS:50

w.e.f 2024-2025 (23AK Batch) **PRACTICAL** **SYLLABUS**

# LEARNING OBJECTIVES:

* Acquainting and skill enhancement in the usage of laboratory equipment
* To apply the basic concept of inheritance for applied research
* To get familiar with phylogeny ad geological history of origin & evolution of animals
* To understand the zoogeographical distribution of animals

**LEARNING OUTCOMES**

By the end of the course, students will be able to

CO1 –L1: Recall key concepts and examples of fossil evidence, homology, analogy, embryological evidences, connecting links, phylogeny of the horse, genetic drift and zoogeographical regions etc.

CO2–L2: Explain the principles and differences between Lamarckism and Darwinism and describe how embryological evidence supports evolutionary theory.

CO3 –L3: Use examples of Darwin’s finches to demonstrate the concept of genetic drift.

CO4–L4: Analyze the phylogeny of the horse and elephant to understand evolutionary relationships and analyze the significance of connecting links and missing links.

CO5–L6: Create a detailed chart or map illustrating the zoogeographical regions and the distribution of animals.

**SYLLABUS:**

1. Study of fossil evidences
2. Study of homology and analogy from suitable specimens and pictures
3. Study of embryological evidences by charts/ pictures
4. Study of Lamarckism with images /animations
5. Study of Darwinism with images/ animation
6. Study of connecting links/missing links images/charts
7. Phylogeny of horse and elephant with pictures
8. Study of Genetic Drift by using examples of Darwin’s finches (pictures)
9. Visit to Natural History Museum and submission of report
10. Mapping distribution of animals according to zoogeographical regions.
11. Mapping zoogeographical regions

# RFERENCE WEB LINKS:

* <https://www.labster.com/course-packages/evolution-and-diversity>
* <https://www.biointeractive.org/classroom-resources/stickleback-evolution-virtual-lab>
* <https://www.youtube.com/watch?v=tXbmPhrS4eA>
* <https://www.studocu.com/en-us/document/temple-university/bioe-lab-2-> [biomaterials/1632834116536-zoogeography-assignment/17915777](https://www.studocu.com/en-us/document/temple-university/bioe-lab-2-biomaterials/1632834116536-zoogeography-assignment/17915777)
* <https://guides.library.tulsacc.edu/c.php?g=932434&p=6720765>
* [https://bio.libretexts.org/Courses/Butte\_College/BC%3A\_BIOL\_2\_-](https://bio.libretexts.org/Courses/Butte_College/BC%3A_BIOL_2_-_Introduction_to_Human_Biology_%28Grewal%29/Text/09%3A_Biological_Evolution/9.3%3A_Evidence_for_Evolution)
* [\_Introduction\_to\_Human\_Biology\_%28Grewal%29/Text/09%3A\_Biological\_Evolution/9.3%3A](https://bio.libretexts.org/Courses/Butte_College/BC%3A_BIOL_2_-_Introduction_to_Human_Biology_%28Grewal%29/Text/09%3A_Biological_Evolution/9.3%3A_Evidence_for_Evolution)
* [\_Evidence\_for\_Evolution](https://bio.libretexts.org/Courses/Butte_College/BC%3A_BIOL_2_-_Introduction_to_Human_Biology_%28Grewal%29/Text/09%3A_Biological_Evolution/9.3%3A_Evidence_for_Evolution)
* <https://www.coursehero.com/study-guides/boundless-biology/evidence-of-evolution/>

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