

**MHARANA PRATAP P.G. COLLEGE, JUNGLE DHUSAN,  
GORAKHPUR**

**Class: B.Sc. IV Semester**

**Lesson Plan: 2024-25**

**Subject: Zoology Practical**

| Date       | Lecture No. | Teacher's Name | Paper/ Unit | Topic                                                                                                              |
|------------|-------------|----------------|-------------|--------------------------------------------------------------------------------------------------------------------|
| 4.02.2025  |             | RN Singh/ SK   | I           | Measure the pre and post clitellar lengths of earthworms and calculate mean, median, mode, standard deviation etc. |
|            |             | RN Singh/ SK   |             | Measure the pre and post clitellar lengths of earthworms and calculate mean, median, mode, standard deviation etc. |
| 10.02.2025 |             | RN Singh/ SK   |             | Measure the height and weight of all students in the class and apply statistical Measures                          |
|            |             | RN Singh/ SK   |             | Measure the height and weight of all students in the class and apply statistical Measures                          |
| 11.02.2025 |             | RN Singh/ SK   | II          | To perform bacterial culture and calculate generation time of bacteria.                                            |
|            |             | RN Singh/ SK   |             | To perform bacterial culture and calculate generation time of bacteria.                                            |
| 17.02.2025 |             | RN Singh/ SK   |             | To study Restriction enzyme digestion using teaching kits                                                          |
|            |             | RN Singh/ SK   |             | To study Restriction enzyme digestion using teaching kits                                                          |
| 18.02.2025 |             | RN Singh/ SK   |             | To study Polymerase Chain Reaction (PCR) using teaching kits.                                                      |
|            |             | RN Singh/ SK   |             | To study Polymerase Chain Reaction (PCR) using teaching kits.                                                      |
| 24.02.2025 |             | RN Singh/ SK   |             | Demonstration of agarose gel electrophoresis for detection of DNA                                                  |
|            |             | RN Singh/ SK   |             | Demonstration of agarose gel electrophoresis for detection of DNA                                                  |
| 25.02.2025 |             | RN Singh/ SK   |             | Demonstration of Polyacrylamide Gel Electrophoresis (PAGE) for detection of proteins.                              |
|            |             | RN Singh/ SK   |             | Demonstration of Polyacrylamide Gel Electrophoresis (PAGE) for detection of proteins.                              |
| 3.03.2025  |             | RN Singh/ SK   |             | To calculate molecular weight of unknown DNA and protein fragments from gel pictures.                              |
|            |             | RN Singh/ SK   |             | To calculate molecular weight of unknown DNA and protein fragments from gel pictures.                              |
| 4.03.2025  |             | RN Singh/ SK   | III         | To learn the basics of computer applications                                                                       |
|            |             | RN Singh/ SK   |             | To learn the basics of computer applications                                                                       |
| 10.03.2025 |             | RN Singh/ SK   |             | To learn sequence analysis using BLAST                                                                             |
|            |             | RN Singh/ SK   |             | To learn sequence analysis using BLAST                                                                             |
| 11.03.2025 |             | RN Singh/ SK   |             | To learn Multiple sequence alignment using CLUSTALW                                                                |
|            |             | RN Singh/ SK   |             | To learn Multiple sequence alignment using                                                                         |

|            |  |              |    |                                                                                                  |
|------------|--|--------------|----|--------------------------------------------------------------------------------------------------|
|            |  |              |    | CLUSTALW                                                                                         |
| 17.03.2025 |  | RN Singh/ SK |    | To learn about Phylogenetic analysis using the programme PHYLIP                                  |
|            |  | RN Singh/ SK |    | To learn about Phylogenetic analysis using the programme PHYLIP                                  |
| 18.03.2025 |  | RN Singh/ SK |    | To learn how to perform Primer designing for PCR using available softwares etc.                  |
|            |  | RN Singh/ SK |    | To learn how to perform Primer designing for PCR using available softwares etc.                  |
| 1.04.2025  |  | RN Singh/ SK | IV | Gel Documentation System <a href="https://youtu.be/WPpt3-FanNE">https://youtu.be/WPpt3-FanNE</a> |
|            |  | RN Singh/ SK |    | Gel Documentation System <a href="https://youtu.be/WPpt3-FanNE">https://youtu.be/WPpt3-FanNE</a> |
| 7.04.2025  |  | RN Singh/ SK |    | Colorimeter- <a href="https://youtu.be/v4aK6G0bGuU">https://youtu.be/v4aK6G0bGuU</a>             |
|            |  | RN Singh/ SK |    | Colorimeter- <a href="https://youtu.be/v4aK6G0bGuU">https://youtu.be/v4aK6G0bGuU</a>             |
| 8.04.2025  |  | RN Singh/ SK |    | PCR Part 1- <a href="https://youtu.be/CpGX1UFSI4A">https://youtu.be/CpGX1UFSI4A</a>              |
|            |  | RN Singh/ SK |    | DNA isolation Part 1- <a href="https://youtu.be/QE7U10JnY9A">https://youtu.be/QE7U10JnY9A</a>    |
| 15.04.2025 |  | RN Singh/ SK |    | DNA isolation part 2- <a href="https://youtu.be/-efr_HFeHxM">https://youtu.be/-efr_HFeHxM</a>    |
|            |  | RN Singh/ SK |    | DNA curve- <a href="https://youtu.be/ubL8QxTeuG4">https://youtu.be/ubL8QxTeuG4</a>               |
| 21.04.2025 |  | RN Singh/ SK |    | Spectrophotometer- <a href="https://youtu.be/ubL8QxTeuG4">https://youtu.be/ubL8QxTeuG4</a>       |
|            |  | RN Singh/ SK |    | Agarose Part 1- <a href="https://youtu.be/7gvHPFww--g">https://youtu.be/7gvHPFww--g</a>          |
| 22.04.2025 |  | RN Singh/ SK |    | Agarose part 2- <a href="https://youtu.be/j_bOZCHNsSg">https://youtu.be/j_bOZCHNsSg</a>          |
|            |  | RN Singh/ SK |    | Agarose Part 1- <a href="https://youtu.be/7gvHPFww--g">https://youtu.be/7gvHPFww--g</a>          |
| 28.04.2025 |  | RN Singh/ SK |    | Agarose part 2- <a href="https://youtu.be/j_bOZCHNsSg">https://youtu.be/j_bOZCHNsSg</a>          |
|            |  | RN Singh/ SK |    | Revision                                                                                         |
| 29.04.2025 |  | RN Singh/ SK |    | Revision                                                                                         |
|            |  | RN Singh/ SK |    | Revision                                                                                         |