

| Lecture Plan Practical   |              |                          |                          |   |                                   |           |  |  |  |  |  |  |  |  |  |
|--|--------------|--------------------------|--------------------------|---|-----------------------------------|-----------|--|--|--|--|--|--|--|--|--|
| <b>Name of the College: Government College of Arts, Science and Commerce, Sanquelim - Goa</b>  |              |                          |                          |   |                                   |           |  |  |  |  |  |  |  |  |  |
| <b>Name of Faculty:</b> Dr. Vaibhav Chindarkar   |              | <b>Subject:</b> Zoology  |                          |   |                                   |           |  |  |  |  |  |  |  |  |  |
| <b>Paper code: ZOO-306 Practical</b><br><b>Biochemistry of Metabolic processes</b>   |              | <b>Program: T.Y. BSc</b> |                          |   | <b>Division: A</b>                |           |  |  |  |  |  |  |  |  |  |
| <b>Academic year: 2025- 2026</b>   |              | <b>Semester: VI</b>      |                          |   | <b>Total Practical Hrs: 60</b>    |           |  |  |  |  |  |  |  |  |  |
|  |              |                          |                          |   |                                   |           |  |  |  |  |  |  |  |  |  |
|  |              |                          |                          |   |                                   |           |  |  |  |  |  |  |  |  |  |
| <b>Student Learning Outcome:</b> The student will be able to Perform and interpret basic biochemical laboratory techniques for the qualitative and quantitative estimation and separation of carbohydrates, lipids, amino acids, and related biomolecules using standard analytical and chromatographic methods. |              |                          |                          |   |                                   |           |  |  |  |  |  |  |  |  |  |
| Month  | Lecture From | Lecture To               | No. of lectures allotted | Topic, Subtopic to be covered   | Exercise/ Assignment              | ICT Tools | Reference books  |  |  |  |  |  |  |  |  |
| December   | 01-12-2025   | 06-12-2025               | 02                       | Estimation of concentration of plasma glucose in the given sample by colorimetric / spectrophotometric method | Actual Experiment to be performed |           | Introduction to Practical Biochemistry by György Hegyi, József Kardos, Mihály Kovács, András Málnási-Csizmadia, László Nyitrai, Gábor Pál, László Radnai, Attila Reményi, and István Venekei Copyright © 2013 Eötvös Loránd University |  |  |  |  |  |  |  |  |

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|----------|------------|------------|----|---|--|-----------------------------------|--|
| December | 08-12-2025 | 13-12-2025 | 02 | Estimation of concentration of plasma glucose in the given sample by colorimetric / spectrophotometric method |  | Actual Experiment to be performed | Introduction to Practical Biochemistry by György Hegyi, József Kardos, Mihály Kovács, András Málnási-Csizmadia, László Nyitrai, Gábor Pál, László Radnai, Attila Reményi, and István Venekei Copyright © 2013 Eötvös Loránd University |
| December | 15-12-2025 | 20-12-2025 | 02 | Estimation of fatty acids from the given oil/ fat samples by titration method.                                |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill  |
| December | 22-12-2025 | 24-12-2025 | 02 | Estimation of fatty acids from the given oil/ fat samples by titration method.                                |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill  |
| January  | 02-01-2026 | 03-01-2026 | 02 | Estimation of cholesterol concentration in the given blood sample.  |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill  |

|         |            |            |    |   |  |                                   |   |
|---------|------------|------------|----|---|--|-----------------------------------|---|
| January | 05-01-2025 | 10-01-2025 | 02 | Estimation of cholesterol concentration in the given blood sample.                      |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill |
| January | 12-01-2025 | 17-01-2025 | 02 | Separation of lipids by thin layer chromatographic method of the given sample.          |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill |
| January | 19-01-2026 | 24-01-2026 | 02 | Separation of amino acids by paper chromatography.                                      |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill |
| January | 27-01-2026 | 31-01-2025 | 02 | Estimation of glycogen in the given sample by colorimetric / Spectrophotometric method. |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill |

|          |            |            |    |   |  |                                   |  |
|----------|------------|------------|----|---|--|-----------------------------------|--|
| February | 02-02-2026 | 07-02-2026 | 02 | Determination of saponification value of oil. |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill online resources |
| February | 09-02-2026 | 14-02-2026 | 02 | Determination of saponification value of oil. |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill online resources |
| February | 16-02-2026 | 21-02-2026 | 02 | Determination of iodine number of oil.        |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill online resources |
| February | 23-02-2026 | 28-02-2026 | 02 | Determination of iodine number of oil.        |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill online resources |

|       |            |            |    |  |  |                                   |  |
|-------|------------|------------|----|--|--|-----------------------------------|--|
| March | 02-03-2026 | 07-03-2026 | 02 | Detection of SGOT in serum/ tissue.            |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill online resources |
| March | 09-03-2026 | 14-03-2026 | 02 |  |  |                                   |  |
| March | 16-03-2026 | 21-03-2026 | 02 | Detection of SGOT in serum/ tissue.            |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill online resources |
| March | 23-03-2026 | 28-03-2026 | 02 |  |  |                                   |  |
|       |            |            |    | Estimation of amino acids by Ninhydrin method. |  | Actual Experiment to be performed | <b>An introduction to practical biochemistry</b> [by] David T. Plummer. Plummer, David T. London, New York, McGraw-Hill online resources |
|       |            |            |    | Estimation of amino acids by Ninhydrin method. |  |                                   |  |

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**\* Assessment Rubrics**

| <b>Component</b> | <b>Max Marks</b> |
|------------------|------------------|
| Practical        | 25               |