

### Economics

### Economics - Syllabus of Theory Paper

| Part A Introduction  |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |
|----------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Program: Certificate |                                                                      | Class: B.A. I year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Year: 2021<br>(1 <sup>st</sup> year) |
|                      |                                                                      | Session: 2021-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                      |
| Subject: Economics   |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |
| 1                    | Course Code                                                          | A1-ECONIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |
| 2                    | Course Title                                                         | MICRO ECONOMICS (Paper 1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |
| 3                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | CORE COURSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                      |
| 4                    | Pre-requisite (if any)                                               | 12th Pass in Any Discipline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                      |
| 5                    | Course Learning outcomes (CLO)                                       | After completing this course, students will be able to understand rational behaviour and fundamentals of microeconomics. They will be able to explain consumer's and producer's behaviour and their optimum decisions. Students will be able to know about the firms and industry, markets and their decisions about optimum production. They will be also able to explain the theory of distribution and concept of economic welfare. Learning microeconomics is an excellent way to gain an understanding of many factors that affect us in the real-world, such as methods of buying goods, product pricing and input pricing. Ultimately, learning microeconomics is key in learning about the principles of economics. |                                      |

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| Part A Introduction  |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |
|----------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Program: Certificate |                                                                      | Class: B.A. I Year                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Year: 2021<br><i>1<sup>st</sup> year</i> |
| Session: 2021-22     |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |
| Subject: Economics   |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |
| 1                    | Course Code                                                          | A1-ECON2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                          |
| 2                    | Course Title                                                         | INDIAN ECONOMY(Paper 2)                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                          |
| 3                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | CORE COURSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                          |
| 4                    | Pre-requisite (if any)                                               | 12 th Pass in Any Discipline                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                          |
| 5                    | Course Learning outcomes (CLO)                                       | After completing this course, students will be able to sharpen the analytical skills by highlighting on broad overview of the Indian economy. They will be familiar with the issues related to Agriculture, Industry, Foreign Trade, Economic Planning and various Economic Problems of India. Students will be acquainted with broad overview of Madhya Pradesh Economy. They will be able to develop, analyse and interpret events and issues related to Indian Economy. |                                          |

## BA I Year: English Literature

## Part A Introduction

|                                      |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |                  |
|--------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------|
| Program: Certificate Course          |                                                                      | Class': BA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Year: I | Session: 2021-22 |
| Subject: English Literature (Theory) |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |                  |
| 1                                    | Course Code                                                          | A1-ELIIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                  |
| 2                                    | Course Title                                                         | Study of Drama (Paper I, Theory)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |                  |
| 3                                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |                  |
| 4                                    | Pre-requisite (if any)                                               | To study this course, a student must have had the subject English Language/ English Literature in class 12 <sup>th</sup> .                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |                  |
| 5                                    | Course Learning outcomes (CLO)                                       | <p>The course will inculcate team work, communicative ability, creativity and aesthetic sense in students, enabling them to understand, in detail, drama and the theatre Through this course, the students will acquire the knowledge of</p> <ul style="list-style-type: none"> <li>• Different genres of drama, like comedy, tragedy, epic theatre, and commedia dell'arte</li> <li>• Distinctive features of Sanskrit, Greek, English, American, and Indian plays</li> <li>• Dramatic techniques and elements like plot, theme, character, spectacle and narrative</li> </ul> |         |                  |

| Part A Introduction                     |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |
|-----------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Program: Certificate Course             |                                                                      | Class: BA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Year: I |
|                                         |                                                                      | Session: 2021-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |
| Subject: English Literature (Practical) |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |
| 1                                       | Course Code                                                          | A1-ELIT1P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |
| 2                                       | Course Title                                                         | Applied Drama (Paper 1, Practical)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |
| 3                                       | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |
| 4                                       | Pre-requisite (if any)                                               | To study this course, a student must have had the subject English Language/English Literature in class 12 <sup>th</sup> .                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |
| 5                                       | Course Learning outcomes (CLO)                                       | <p>The course will inculcate team work, communicative ability, creativity and aesthetic sense in students, enabling them to understand, in detail, drama and the theatre. Through this course, the students will acquire the knowledge of</p> <ul style="list-style-type: none"> <li>• Different genres of drama, like comedy, tragedy, epic theatre, and commedia dell'arte</li> <li>• Distinctive features of Sanskrit, Greek, English, American, and Indian plays</li> <li>• Dramatic techniques and elements like plot, theme, character, spectacle and narrative</li> </ul> |         |

### BA I Year: English Literature

| Part A Introduction                  |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |
|--------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Program: Certificate Course          |                                                                      | Class: BA                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Year: I |
|                                      |                                                                      | Session: 2021-22                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |
| Subject: English Literature (Theory) |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |
| 1                                    | Course Code                                                          | AI-ELIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |
| 2                                    | Course Title                                                         | Study of Poetry (Paper 2, Theory)                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |
| 3                                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |
| 4                                    | Pre-requisite (if any)                                               | To study this course, a student must have had the subject English Language/English Literature in class 12 <sup>th</sup> .                                                                                                                                                                                                                                                                                                                                                  |         |
| 5                                    | Course Learning outcomes (CLO)                                       | <p>The Study of Poetry will not only instruct and delight the students, but also inspire them to have positivity, creativity, and a new way of thinking. After the study of this paper, the students will be able:</p> <ul style="list-style-type: none"><li>• to identify, interpret, analyze and appreciate the various elements of poetry,</li><li>• to develop literary intellect, and</li><li>• to appreciate the lyrical and sonorous quality of language.</li></ul> |         |

| Part A Introduction                     |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |                  |
|-----------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------|
| Program: Certificate Course             |                                                                      | Class: BA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Year: I | Session: 2021-22 |
| Subject: English Literature (Practical) |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |                  |
| 1                                       | Course Code                                                          | A1-ELIT2P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |                  |
| 2                                       | Course Title                                                         | Applied Poetry (Paper 2, Practical)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |                  |
| 3                                       | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |                  |
| 4                                       | Pre-requisite (if any)                                               | To study this course, a student must have had the subject English Language/English Literature in class 12 <sup>th</sup> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |                  |
| 5                                       | Course Learning outcomes (CLO)                                       | <p>The Study of Poetry will not only instruct and delight the students but also inspire them to have positivity, creativity, and a new way of thinking. After the study of this paper, the students will be able:</p> <ul style="list-style-type: none"><li>• to identify, interpret, analyze, and appreciate the various elements of poetry,</li><li>• to develop literary intellect, and</li><li>• to be able to appreciate the lyrical and sonorous quality of language and create poetry</li></ul> <p>The course is beneficial for learners in understanding the mechanism of literature in a creative manner. This course will:</p> <ul style="list-style-type: none"><li>• accelerate the confidence of students for extempore English and surge their knowledge; and</li><li>• promote the analytical and arguing capacity of students.</li></ul> |         |                  |

| Part A: Introduction        |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                             |            |
|-----------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Program: Certificate Course |                                                                      | Class: B.A. I Year                                                                                                                                                                                                                                                                                                                                                                          | Year: 2021 |
|                             |                                                                      | Session: 2021-2022                                                                                                                                                                                                                                                                                                                                                                          |            |
| Subject: Geography          |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                             |            |
| 1.                          | Course Code                                                          | A1 – GEOG1T                                                                                                                                                                                                                                                                                                                                                                                 |            |
| 2.                          | Course Title                                                         | <i>Paper – 1: Human Geography: Environment and Culture</i>                                                                                                                                                                                                                                                                                                                                  |            |
| 3.                          | Course Type<br>(Core/ Elective/ Generic<br>Elective/ Vocational/...) | <i>PAPER 1</i><br>Core course                                                                                                                                                                                                                                                                                                                                                               |            |
| 4.                          | Pre-requisite (If any)                                               | To study the course, a student must have passed<br>12 <sup>th</sup> Class.                                                                                                                                                                                                                                                                                                                  |            |
| 5.                          | Course Learning<br>Outcomes (CLO)                                    | After the completion of course, the students will be able to:<br><br>i. Discuss and describe the major concepts and key principles of Human Geography including place, space, scale and landscape.<br><br>ii. Appreciate the diversity of the cultural backgrounds and places.<br><br>iii. Approach problem solving from a geographic perspective by understanding the role location plays. |            |

| Part A: Introduction        |                                                                      |                                                                                                                                                                                                                                                                                                       |            |
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| Program: Certificate Course |                                                                      | Class: B.A. I Year                                                                                                                                                                                                                                                                                    | Year: 2021 |
|                             |                                                                      | Session: 2021-2022                                                                                                                                                                                                                                                                                    |            |
| Subject: Geography          |                                                                      |                                                                                                                                                                                                                                                                                                       |            |
| 1.                          | Course Code                                                          | A1 – GEOG1P                                                                                                                                                                                                                                                                                           |            |
| 2.                          | Course Title                                                         | Practical Paper 2: Cartographic Techniques                                                                                                                                                                                                                                                            |            |
| 3.                          | Course Type<br>(Core/ Elective/ Generic<br>Elective/ Vocational/...) | Core course                                                                                                                                                                                                                                                                                           |            |
| 4.                          | Pre-requisite (If any)                                               | To study this course, a student must have passed<br>12 <sup>th</sup> Class.                                                                                                                                                                                                                           |            |
| 5.                          | Course Learning<br>Outcomes (CLO)                                    | After the completion of course, the students will be able to:<br><br>i. Develop hands on skills in diagrammatic<br>representation of data.<br><br>ii. Comprehend thematic mapping techniques, its<br>cartographic representation and interpretation.<br><br>iii. Take up Cartography as a profession. |            |

| Part A: Introduction        |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |
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| Program: Certificate Course |                                                                      | Class: B.A. I Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Year: 2021 |
|                             |                                                                      | Session: 2021-2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |
| Subject: Geography          |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |
| 1.                          | Course Code                                                          | A1 - GEOG2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
| 2.                          | Course Title                                                         | Paper -2: Physical Geography – Lithosphere (Geomorphology)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |
| 3.                          | Course Type<br>(Core/ Elective/ Generic<br>Elective/ Vocational/...) | Core course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
| 4.                          | Pre-requisite (If any)                                               | To study the course, a student must have passed<br>12 <sup>th</sup> Class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |
| 5.                          | Course Learning<br>Outcomes (CLO)                                    | After the completion of course, the students will have ability to:<br><br>i. Understand the internal structure of the earth, rocks that<br>compose it and forces within the earth that act to deform it.<br><br>ii. Learn about the contribution of ancient Indian scholars in the<br>development of Physical Geography.<br><br>iii. Analyze how the natural and anthropogenic operating factors<br>affect the development of land forms.<br><br>iv. Understand about the denudation processes that unceasingly<br>act at the earth's surface to shape land forms and reduce<br>relief.<br><br>v. Assess the role of structure, stage and time in shaping the<br>land forms. |            |

| Part A: Introduction        |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                 |            |
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| Program: Certificate Course |                                                                      | Class: B.A. I Year                                                                                                                                                                                                                                                                                                                                                              | Year: 2021 |
|                             |                                                                      | Session: 2021-2022                                                                                                                                                                                                                                                                                                                                                              |            |
| Subject: Geography          |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                 |            |
| 1.                          | Course Code                                                          | A1 – GEOG1P                                                                                                                                                                                                                                                                                                                                                                     |            |
| 2.                          | Course Title                                                         | Practical Paper -2: General Cartography                                                                                                                                                                                                                                                                                                                                         |            |
| 3.                          | Course Type<br>(Core/ Elective/ Generic<br>Elective/ Vocational/...) | Core course                                                                                                                                                                                                                                                                                                                                                                     |            |
| 4.                          | Pre-requisite (If any)                                               | To study this course, a student must have passed 12 <sup>th</sup> Class.                                                                                                                                                                                                                                                                                                        |            |
| 5.                          | Course Learning Outcomes (CLO)                                       | After the completion of course, the students will be able to:<br><br>i. Learn the principles of Map Design, Map Reading and Construction of Scale.<br><br>ii. Create professional and aesthetically pleasing maps through thoughtful application of Cartographic Conventions.<br><br>iii. Comprehend the principles and types of Surveying and learn the Chain and Tape survey. |            |

### Format for Syllabus of Theory Paper

| Part A Introduction  |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                      |             |
|----------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Program: Certificate |                                                                      | Class: BA I                                                                                                                                                                                                                                                                                                                                                                                                          | Year : 2021 |
|                      |                                                                      | Session : 2021-22                                                                                                                                                                                                                                                                                                                                                                                                    |             |
| Subject : History    |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                      |             |
| 1                    | Course Code                                                          | AI-HIST-1T                                                                                                                                                                                                                                                                                                                                                                                                           |             |
| 2                    | Course Title                                                         | Idea of Bharat                                                                                                                                                                                                                                                                                                                                                                                                       |             |
| 3                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                          |             |
| 4                    | Pre-requisite (if any)                                               | This course can be opted by any student who has passed 12th class.                                                                                                                                                                                                                                                                                                                                                   |             |
| 5                    | Course Learning outcomes (CLO)                                       | Students will acquire knowledge regarding the primitive life and cultural status of the people of ancient India. They can gather knowledge about the society, culture, religion and political history of ancient India. They will also acquire the knowledge of changing socio-cultural scenarios of India. By studying this paper, students will get to know the golden past of India and feel proud of themselves. |             |
| 6                    | Credit Value                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                      |             |

### Format for Syllabus of Theory Paper

| Part A Introduction  |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program: Certificate | Class : BA I                                                         | Year : 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Session : 2021-22    |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Subject : History    |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1                    | Course Code                                                          | AI-HIST-2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2                    | Course Title                                                         | History of Ancient India (From Early to 1205 AD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4                    | Pre-requisite (if any)                                               | This course can be opted by any student who has passed 12th class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5                    | Course Learning Outcomes (CLO)                                       | The students will learn to analyze the various stages of evolution and development of man in the Prehistoric, Protohistoric and Historic Age. To have an in depth knowledge about the ancient civilizations of India like Indus-Saraswati Civilization, Vedic civilization, Later Vedic Civilization etc. and compare them with the other contemporary civilizations of the world. To explain in detail about golden past of India during the Mauryan and Gupta period, their conquests, art, architecture and literature, etc. They will able to write meaningful essays on the brave and courageous Rajput clans and the South Indian dynasties of India. |

## Format for Syllabus of Theory Paper

| Part A Introduction                        |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
|--------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Program:<br>Certificate/Diploma<br>Degree/ |                                                                            | Class: BA I<br>Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Session: 2021-22 |
| Subject: Political Science                 |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
| 1                                          | Course Code                                                                | A1-POSC1T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| 2                                          | Course Title                                                               | Political Theory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |
| 3                                          | Course Type (Core<br>Course/Elective/Generic<br>Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |
| 4                                          | Pre-requisite (if any)                                                     | To study this course, a student must have passed 12 <sup>th</sup> .<br>Student of any subject can study this course.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |
| 5                                          | Course Learning outcomes<br>(CLO)                                          | <ol style="list-style-type: none"> <li>1. Student will be able to understand meaning and significance of Political theory, different ideologies and approaches.</li> <li>2. They will be able to explain concept of state and its changing nature.</li> <li>3. They will learn what is power and authority and how they are interwoven. These two concepts will further enhance their understanding of politics.</li> <li>4. They will be able to learn different dimensions of sovereignty and its relation with state.</li> <li>5. They will be able to explain liberty, equality, justice and rights. Understanding of these key political concepts will facilitate students in real political world.</li> <li>6. They will be able to explain different models of democracy and theories of representation.</li> </ol> |                  |

| Part A Introduction                        |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |
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| Program:<br>Certificate/Diploma<br>Degree/ |                                                                            | Class: BA I<br>Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Year: 2021<br>Session: 2021-22 |
| Subject: Political Science                 |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |
| 1                                          | Course Code                                                                | A1-POSC2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                |
| 2                                          | Course Title                                                               | Indian Constitution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                |
| 3                                          | Course Type (Core<br>Course/Elective/Generic<br>Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                |
| 4                                          | Pre-requisite (if any)                                                     | To study this course, a student must have passed 12 <sup>th</sup> .<br>Student of any subject can study this course.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                |
| 5                                          | Course Learning outcomes<br>(CLO)                                          | <ol style="list-style-type: none"> <li>1. Students will be able to understand the constitutional development in India.</li> <li>2. They will be able to answer how constituent assembly was formed.</li> <li>3. They will be able to describe the significance of the Preamble, Fundamental rights and Directive Principles of State Policy in the constitutional design of India.</li> <li>4. They will be able to answer questions pertaining to the function and role of the President, Prime Minister, Governor, Chief Minister, Parliament and State legislature, and the courts in the Constitutional design of India.</li> <li>5. They will be able to identify the power division in constitutional setup.</li> </ol> |                                |

## Part(A)Introduction

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|--------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------|
| Programme : Certificate Course |                                | Class : B.A I <sup>st</sup> Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Year : First | Session : 2021-2022 |
| Subject: SOCIOLOGY             |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                     |
| 01                             | Course Code                    | A1-SOCI 1T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                     |
| 02                             | Course Title                   | Indian Society and Culture paper                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                     |
| 03                             | Course Type                    | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                     |
| 04                             | Pre-requisite                  | Open for all B.A I <sup>st</sup> year students.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                     |
| 05                             | Course Learning Outcomes (CLO) | <p>This paper is expected to bring familiarity among student about Indian society. It will present a comprehensive, integrated and empirical profile of Indian society. It is supposed that the structure and processes operative in the society, the changing agents operating in Indian society presented in this paper will also enable students to gain a better understanding of their own situation and region.</p> <ol style="list-style-type: none"> <li>1. Get an impression about the basic composition of Indian society, its historical moorings, basic philosophical foundations of the society and the institutions.</li> <li>2. The student will have extensive comprehension of Indian traditions and the opportunity to explore and express them.</li> <li>3. They will also learn in detail about the three layers of Indian society: namely "Aranyak, Lok (Gramya) and Nagar"</li> <li>4. After reading this course the student will be able to understand and strengthen local/regional employment avenues.</li> </ol> |              |                     |

| Part A Introduction  |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |
|----------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Program: Certificate |                                                                      | Class: B.Sc.<br>1 <sup>st</sup> year                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Year : 2021<br>Session: 2021-22 |
| Subject: Botany      |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |
| 1                    | Course Code                                                          | S1-BOTA1T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |
| 2                    | Course Title                                                         | Applied Botany (Paper I)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                 |
| 3                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                 |
| 4                    | Pre-requisite (if any)                                               | To study this course, a student must have had the subject Biology/ Life Sciences/ Agriculture in class/12th                                                                                                                                                                                                                                                                                                                                                                                |                                 |
| 5                    | Course Learning outcomes (CLO)                                       | By the end of this course the student should have: <ul style="list-style-type: none"> <li>• Understood the significance and role of botany.</li> <li>• Learnt the basic aspects of applied botany.</li> <li>• Gained knowledge about employment opportunities in field of botany</li> <li>• Gained knowledge about start-up opportunities in the field of botany</li> <li>• Learnt about opportunities of social services</li> <li>• Gain knowledge about best health practices</li> </ul> |                                 |
| 6                    | Credit Value                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |

| Part A Introduction  |                                                                      |                                                                                                                                                                                                                                                                     |                                |
|----------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Program: Certificate |                                                                      | Class: B.Sc.<br>1 <sup>st</sup> year                                                                                                                                                                                                                                | Year: 2021<br>Session: 2021-22 |
| Subject: Botany      |                                                                      |                                                                                                                                                                                                                                                                     |                                |
| 1                    | Course Code                                                          | S1-BOTA1P                                                                                                                                                                                                                                                           |                                |
| 2                    | Course Title                                                         | Applied Botany Practical (paper I)                                                                                                                                                                                                                                  |                                |
| 3                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                         |                                |
| 4                    | Pre-requisite (if any)                                               | To study this course, a student must have had the subject Botany, Biology, Life Science in class/12th/.                                                                                                                                                             |                                |
| 5                    | Course Learning outcomes (CLO)                                       | On completion of this course, learners will be able to:<br>By the end of this course the student should have knowledge of practical skill related with ethnobotany, tissue culture, application of bioinformatics software and tools of recombinant DNA technology. |                                |

| Part A Introduction  |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
|----------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Program: Certificate |                                                                      | Class: BSc-I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Year:2021 |
|                      |                                                                      | Session:2021-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| Subject: Botany      |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| 1                    | Course Code                                                          | S1-BOTA2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |
| 2                    | Course Title                                                         | Basic Botany (paper II)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
| 3                    | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |
| 4                    | Pre-requisite (if any)                                               | To study this course, a student must have had the subject botany in class/12th/ certificate/diploma.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |
| 5                    | Course Learning outcomes (CLO)                                       | <ul style="list-style-type: none"><li>• This course will help the student to understand the diversity of plants and evolutionary process in plant kingdoms.</li><li>• It gives an accounts of plant adaptations from aquatic condition to colonize terrestrial habitat.</li><li>• The changes in morphological, anatomical and reproductive structures that propel plant evolution can be investigated.</li><li>• The economic importance and significance of plants in nature will be understood.</li><li>• They will be acquainted with locally prevalent microbial diseases of plants and humans</li></ul> |           |

| Part A Introduction        |                                                                      |                                                                                                                                                                                                                                                                                                        |            |
|----------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Program: Certificate       |                                                                      | Class: 1 <sup>st</sup> year                                                                                                                                                                                                                                                                            | Year: 2021 |
|                            |                                                                      | Session: 2021-22                                                                                                                                                                                                                                                                                       |            |
| Subject : Botany Practical |                                                                      |                                                                                                                                                                                                                                                                                                        |            |
| 1                          | Course Code                                                          | S1-BOTA2P                                                                                                                                                                                                                                                                                              |            |
| 2                          | Course Title                                                         | Basic Botany Practical (Paper II)                                                                                                                                                                                                                                                                      |            |
| 3                          | Course Type (Core Course/Elective/Generic Elective/Vocational/.....) | Core Course                                                                                                                                                                                                                                                                                            |            |
| 4                          | Pre-requisite (if any)                                               | To study this course, a student must have had the subject of Biology/ Life science/Agriculture in class 12th.                                                                                                                                                                                          |            |
| 5                          | Course Learning outcomes (CLO)                                       | <ul style="list-style-type: none"><li>• Students will learn to carry out practical work in the laboratory,</li><li>• Interpreting plant morphology and anatomy of various groups of lower and higher plants.</li><li>• Students will be able to identify the major groups of microorganisms.</li></ul> |            |

## B.Sc. I Year Chemistry Syllabus

CBCS Annual Pattern  
From Academic Year 2021-2022

## Paper I

| Part A Introduction            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |                    |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Program-CERTIFICATE            | Class-B.Sc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Year- First | Session: 2021-2022 |
| Subject - Chemistry            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |                    |
| Course Code                    | S1-CHEMIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                    |
| Course Title                   | Fundamentals of Chemistry( Paper I)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                    |
| Course Type                    | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                    |
| Pre-requisite (if any)         | To study this course our students must have had the subject <u>Chemistry</u> in class +2 or equivalent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |                    |
| Course Learning Outcomes (CLO) | By the end of this course students will learn the following aspects of Chemistry: <ol style="list-style-type: none"> <li>1. Ancient Indian chemical techniques.</li> <li>2. Various theories and principles applied to reveal atomic structure.</li> <li>3. Significance of quantum numbers.</li> <li>4. Concept of periodic properties of elements.</li> <li>5. Theories related to chemical bonding.</li> <li>6. Acid-base concept, ph, buffer.</li> <li>7. Factors responsible for reactivity of organic molecules.</li> <li>8. Basics and mechanism of chemical kinetics.</li> <li>9. Properties of electrolytes.</li> </ol> |             |                    |

| PRACTICAL           |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |
|---------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Program-CERTIFICATE | Class- B.Sc.                   | Year- First                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Session: 2021-2022 |
| Subject –Chemistry  |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |
| 1                   | Course Code                    | S1-CHEMIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |
|                     | Course Title                   | Qualitative & Quantitative Chemical analysis (Paper-II)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |
| 2                   | Course Type                    | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |
| 3                   | Course Learning Outcomes (CLO) | By the end of this course students will learn the following aspects of Laboratory exercises in Chemistry: <ol style="list-style-type: none"> <li>1. Importance of chemical safety and lab safety while performing experiments in laboratory</li> <li>2. Qualitative inorganic analysis</li> <li>3. Elemental analysis of organic compounds (non-instrumental)</li> <li>4. Qualitative identification of functional group of organic compounds</li> <li>5. Techniques of pH measurements</li> <li>6. Preparation of buffer solutions</li> </ol> |                    |

## B.Sc. I Year Chemistry Syllabus

CBCS Annual Pattern  
From Academic Year 2021-2022

## Paper II

| Part A Introduction            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |                    |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Program-CERTIFICATE            | Class- B.Sc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Year- First | Session: 2021-2022 |
| Subject - Chemistry            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |                    |
| Course Code                    | SI-CHEM2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                    |
| Course Title                   | Analytical Chemistry (Paper II)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |                    |
| Course Type                    | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                    |
| Pre-requisite (if any)         | To study this course students must have had the subject <u>Chemistry</u> in class +2 or equivalent.                                                                                                                                                                                                                                                                                                                                                                                                              |             |                    |
| Course Learning Outcomes (CLO) | <p>By the end of this course students will learn the following aspects of Chemistry:</p> <ol style="list-style-type: none"><li>1. Basic concepts of Mathematics for Chemists.</li><li>2. Fundamentals of analytical chemistry and steps involved in analysis.</li><li>3. Basic knowledge of Computer for chemists.</li><li>4. Basic Concepts of Chemical equilibrium.</li><li>5. Principles of Chromatography and chromatographic techniques.</li><li>6. Various techniques of Spectroscopic Analysis.</li></ol> |             |                    |

| PRACTICAL               |                                |                                                                                                                                                                                                                                                                                                                                                                                             |                    |
|-------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Program-<br>CERTIFICATE | Class- B.Sc.                   | Year- First                                                                                                                                                                                                                                                                                                                                                                                 | Session: 2021-2022 |
| Subject –Chemistry      |                                |                                                                                                                                                                                                                                                                                                                                                                                             |                    |
| 1                       | Course Code                    | SI-CHEM2P                                                                                                                                                                                                                                                                                                                                                                                   |                    |
|                         | Course Title                   | Analytical Processes and Techniques (Paper-II)                                                                                                                                                                                                                                                                                                                                              |                    |
| 2                       | Course Type                    | Core Course                                                                                                                                                                                                                                                                                                                                                                                 |                    |
| 3                       | Course Learning Outcomes (CLO) | <b>By the end of this course students will learn the following aspects of Laboratory exercises in Chemistry:</b><br><br>1. Concepts and analytical methods in Chemistry.<br>2. Preparation of solutions of different concentrations.<br>3. Standardization of the solution.<br>4. Identification of Organic compounds by chromatographic techniques.<br>5. Analysis by Spectral Techniques. |                    |

## SI-MATH1T

| Part A: Introduction        |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |
|-----------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Program: Certificate Course |                                | Class: B.Sc. I Year                                                                                                                                                                                                                                                                                                                                                                                                                    | Year: 2021 |
| Session: 2021-2022          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |
| Subject: Mathematics        |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |
| 1                           | Course Code                    | SI-MATH1T                                                                                                                                                                                                                                                                                                                                                                                                                              |            |
| 2                           | Course Title                   | Algebra, Vector Analysis and Geometry (Paper 1)                                                                                                                                                                                                                                                                                                                                                                                        |            |
| 3                           | Course Type                    | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                            |            |
| 4                           | Pre-requisite (if any)         | To study this course, a student must have had the subject Mathematics in class 12 <sup>th</sup> .                                                                                                                                                                                                                                                                                                                                      |            |
| 5                           | Course Learning Outcomes (CLO) | The course will enable the students to:<br>1. Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix, using the rank of matrix.<br>2. To find the Eigen values and corresponding Eigen vectors for a square matrix.<br>3. Using the knowledge of vector calculus in geometry.<br>4. Enhance the knowledge of three dimensional geometrical figures (eg. cone and cylinder). |            |

## SI-MATH2T

| Part A: Introduction        |                                |                                                                                                                                                                                                                                                                                                                                                                                                              |            |
|-----------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Program: Certificate Course |                                | Class: B.Sc. I Year                                                                                                                                                                                                                                                                                                                                                                                          | Year: 2021 |
|                             |                                | Session: 2021-2022                                                                                                                                                                                                                                                                                                                                                                                           |            |
| Subject: Mathematics        |                                |                                                                                                                                                                                                                                                                                                                                                                                                              |            |
| 1                           | Course Code                    | SI-MATH2T                                                                                                                                                                                                                                                                                                                                                                                                    |            |
| 2                           | Course Title                   | Calculus and Differential Equations (Paper2)                                                                                                                                                                                                                                                                                                                                                                 |            |
| 3                           | Course Type                    | Core Course                                                                                                                                                                                                                                                                                                                                                                                                  |            |
| 4                           | Pre-requisite (if any)         | To study this course, a student must have had the subject Mathematics in class 12 <sup>th</sup> .                                                                                                                                                                                                                                                                                                            |            |
| 5                           | Course Learning Outcomes (CLO) | The course will enable the students to:<br>1. Sketch curves in a plane using its Mathematical properties in the different coordinate systems of reference.<br>2. Using the derivatives in Optimization, Social sciences, Physics and Life sciences etc.<br>3. Formulate the Differential equations for various Mathematical models.<br>4. Using techniques to solve and analyze various Mathematical models. |            |

| Part A - Introduction |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |
|-----------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Program: Certificate  |                                                                   | Class: B.Sc. I Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Year: 2021 |
|                       |                                                                   | Session: 2021-2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |
| Subject: Physics      |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |
| 1.                    | Course Code                                                       | S1-PHYS1T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |
| 2.                    | Course Title                                                      | Thermodynamics and Statistical Physics (Paper 1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |
| 3.                    | Course Type<br>(Core/Elective/Generic<br>Elective/Vocational/...) | Core course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |
| 4.                    | Pre- requisite (If any)                                           | To study this course, a student must have had the subject Physics in 12 <sup>th</sup> class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |
| 5.                    | Course Learning Outcomes (CLO)                                    | <ol style="list-style-type: none"><li>1. The course would enable the students to understand the basic Physics of heat and temperature in relation to energy, work, radiation and matter.</li><li>2. The students are expected to learn that “how laws of thermodynamics are used in a heat engine to transform heat into work”.</li><li>3. This course will also develop an understanding of the various concepts of statistics and the methods to apply them in thermodynamics.</li><li>4. Students will understand the importance of studying statistical mechanics with the behavior of particles under classical and quantum conditions.</li></ol> |            |

| Part A - Introduction |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                    |            |
|-----------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Program: Certificate  |                                                             | Class: B.Sc. I Year                                                                                                                                                                                                                                                                                                                                                                                                | Year: 2021 |
|                       |                                                             | Session: 2021-2022                                                                                                                                                                                                                                                                                                                                                                                                 |            |
| Subject: Physics      |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                    |            |
| 1.                    | Course Code                                                 | S1-PHYS1P (1P)                                                                                                                                                                                                                                                                                                                                                                                                     |            |
| 2.                    | Course Title                                                | Thermodynamics and Statistical Physics Lab (Paper I) (1)                                                                                                                                                                                                                                                                                                                                                           |            |
| 3.                    | Course Type (Core/Elective/Generic Elective/Vocational/...) | Core course                                                                                                                                                                                                                                                                                                                                                                                                        |            |
| 4.                    | Pre- requisite (If any)                                     | To study this course, a student must have had the subject Physics in 12 <sup>th</sup> class.                                                                                                                                                                                                                                                                                                                       |            |
| 5.                    | Course Learning Outcomes (CLO)                              | <ol style="list-style-type: none"><li>1. The students would gain practical knowledge about heat and radiation by performing various experiments.</li><li>2. The students will acquire knowledge about the different forms of distribution of subatomic particles in the system using statistical methods.</li><li>3. The students will be able to use various thermodynamical instruments in daily life.</li></ol> |            |

| Part A - Introduction       |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                             |
|-----------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <b>Program:</b> Certificate |                                                                            | <b>Class:</b> B.Sc. I Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Year:</b> 2021 <b>Session:</b> 2021-2022 |
| <b>Subject:</b> Physics     |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                             |
| 1.                          | <b>Course Code</b>                                                         | S1-PHYS2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                             |
| 2.                          | <b>Course Title</b>                                                        | <b>Mechanics and General Properties of Matter<br/>(Paper 2)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                             |
| 3.                          | <b>Course Type<br/>(Core/Elective/Generic<br/>Elective/Vocational/...)</b> | Core course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |
| 4.                          | <b>Pre- requisite (If any)</b>                                             | To study this course, a student must have had the subject Physics in 12 <sup>th</sup> class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                             |
| 5.                          | <b>Course Learning Outcomes (CLO)</b>                                      | <ol style="list-style-type: none"> <li>1. The course would empower the students to develop the idea about the behavior of physical bodies.</li> <li>2. It will provide the basic concepts related to the motion of all the objects around us in daily life.</li> <li>3. The students would be able to build foundation to various applied field in science and technology especially in the field of mechanical engineering.</li> <li>4. The students will acquire the knowledge of basic mathematical methods to solve the various problem in physics.</li> <li>5. The students will be able the understand the relativistic effect and the relation between energy and mass.</li> </ol> |                                             |

| Part A - Introduction |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                      |            |
|-----------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Program: Certificate  |                                                                   | Class: B.Sc. I Year                                                                                                                                                                                                                                                                                                                                                                                  | Year: 2021 |
|                       |                                                                   | Session: 2021-2022                                                                                                                                                                                                                                                                                                                                                                                   |            |
| Subject: Physics      |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                      |            |
| 1.                    | Course Code                                                       | S1-PHYS2P                                                                                                                                                                                                                                                                                                                                                                                            |            |
| 2.                    | Course Title                                                      | Mechanics and General Properties of Matter Lab (Paper 2)                                                                                                                                                                                                                                                                                                                                             |            |
| 3.                    | Course Type<br>(Core/Elective/Generic<br>Elective/Vocational/...) | Core course                                                                                                                                                                                                                                                                                                                                                                                          |            |
| 4.                    | Pre- requisite (If any)                                           | To study this course, a student must have had the subject Physics in 12 <sup>th</sup> class.                                                                                                                                                                                                                                                                                                         |            |
| 5.                    | Course Learning Outcomes (CLO)                                    | <ol style="list-style-type: none"><li>1. The students would acquire basic practical knowledge related to mechanics through the experiments.</li><li>2. Students will be familiar with various measurement devices by which they can measure various physical quantities with accuracy.</li><li>3. The students will develop the concept related to the mechanics and properties of matter.</li></ol> |            |

## Theory Syllabus

| Part A Introduction                   |                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |
|---------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Porgramme :</b> Certificate Course | <b>Class :</b> B.Sc.                                                        | <b>Year :</b> I year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Session :</b> 2021-2022 |
| <b>Subject:</b> Zoology               |                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |
| 1                                     | <b>Course Code</b>                                                          | <b>S1-ZOOL1T</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |
| 2                                     | <b>Course Title</b>                                                         | <b>Animal Diversity: Non-Chordata (Paper – 1)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |
| 3                                     | <b>Course Type (Core Course/Elective/Generic Elective/Vocational/.....)</b> | <b>Core Course</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |
| 4                                     | <b>Pre-requisite (if any)</b>                                               | To study this course a student must have had the subject Biology in 12 <sup>th</sup> Class                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |
| 5                                     | <b>Course Learning outcomes (CLO)</b>                                       | <p>Upon completion of the course students should be able to</p> <ol style="list-style-type: none"> <li>1. Learn about the importance of systemic, taxonomy and phylogeny to get a concrete idea of evolution of non-chordate phyla.</li> <li>2. Understand the various morphological, anatomical structures and functions of animals of different phyla.</li> <li>3. Get the knowledge about economic, ecological and medical significance of various animals in human welfare.</li> <li>4. Understand the important parasites and their control measures.</li> </ol> |                            |

## Practical Syllabus

| Part A Introduction                   |                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |
|---------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Porgramme :</b> Certificate Course | <b>Class :</b> B.Sc.                                                        | <b>Year :</b> I year                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Session :</b> 2021-2022 |
| <b>Subject:</b> Zoology               |                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |
| 1                                     | <b>Course Code</b>                                                          | <b>S1-ZOOL1P</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |
| 2                                     | <b>Course Title</b>                                                         | <b>Invertebrata (Paper I)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |
| 3                                     | <b>Course Type (Core Course/Elective/Generic Elective/Vocational/.....)</b> | <b>Core Course</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |
| 4                                     | <b>Pre-requisite (if any)</b>                                               | To study this course a student must have had the subject Biology in 12 <sup>th</sup> Class                                                                                                                                                                                                                                                                                                                                                                              |                            |
| 5                                     | <b>Course Learning outcomes (CLO)</b>                                       | <p>Upon completion of the course students should be able to understand</p> <ol style="list-style-type: none"> <li>1. Identify invertebrate animals of different phyla and their histology through study of museum specimens and slides</li> <li>2. Learn their different systems through dissections</li> <li>3. Enhance collaborative learning and communication skills through practical sessions, team work, group discussions, assignments and projects.</li> </ol> |                            |

## Theory Syllabus

| Part A Introduction            |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |
|--------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Porgramme : Certificate Course |                                                                     | Class : B.Sc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Year : I year |
|                                |                                                                     | Session : 2021-2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |
| Subject: Zoology               |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |
| 1                              | Course Code                                                         | S1-ZOOL2T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |
| 2                              | Course Title                                                        | Cell biology, Reproductive biology and Developmental Biology (Paper II)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |
| 3                              | Course Type (Core Course/Elective/Generic Elective/Vocational/....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| 4                              | Pre-requisite (if any)                                              | To study this course a student must have had the subject Biology in 12 <sup>th</sup> Class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| 5                              | Course Learning outcomes (CLO)                                      | Upon completion of the course students should be able to<br>1. Develop deeper understanding of what life is and how it functions at cellular level<br>2. Understand the nature and basic concepts of Cell biology, Reproductive and Developmental biology<br>3. Understand structure and functions of cell membrane and cellular organelles<br>4. Understand the importance of latest reproductive trends, reproductive techniques to be applied for human welfare.<br>5. Understand the general patterns and sequential developmental stages during embryogenesis; and understand how the developmental processes lead to establishment of body plan of multi-cellular organisms.<br>6. Understand about the evolutionary development of various animals. |               |

### Practical Syllabus

| Part A Introduction            |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |
|--------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Porgramme : Certificate Course |                                                                     | Class : B.Sc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Year : I year |
| Session : 2021-2022            |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |
| Subject: Zoology               |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |
| 1                              | Course Code                                                         | S1-ZOOL2P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |
| 2                              | Course Title                                                        | Cytology, Reproductive biology and Embryology (Paper 2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |
| 3                              | Course Type (Core Course/Elective/Generic Elective/Vocational/....) | Core Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |
| 4                              | Pre-requisite (if any)                                              | To study this course a student must have had the subject Biology in 12 <sup>th</sup> Class.                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |
| 5                              | Course Learning outcomes (CLO)                                      | Upon completion of the course students should be able to understand <ol style="list-style-type: none"><li>1. The different stages of mitotic and meiotic cell division and special types of chromosomes</li><li>2. Different stages of embryology</li><li>3. Through squash preparations understand the stages of cell division and structure of polytene chromosome</li><li>4. Enhance collaborative learning and communication skills through practical sessions, team work group discussion, assignments and project.</li></ol> |               |

## Part A introduction

|                                                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programme : Certificate Class:B.COM.1 <sup>st</sup> Year |                          | Session 2021-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Subject: <b>Commerce</b>                                 |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                          | CourseCode               | C1-COMA1T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2                                                        | Course Title             | <b>Financial Accounting</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3                                                        | Course Type              | Core                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4                                                        | Pre-requisite            | Not required open for all                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 5                                                        | Course Learning Outcomes | <p><b>Successful completion of this course, the student will be able to:</b></p> <ul style="list-style-type: none"> <li>• Acquire conceptual knowledge of basics of accounting</li> <li>• Identify events that need to be recorded in the accounting records</li> <li>• Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP</li> <li>• Describe the role of accounting information and its limitations</li> <li>• Equip with the knowledge of accounting process and preparation of accounts of sole trader</li> <li>• Identify and analyze the reasons for the difference between cash book and pass book balances</li> <li>• Recognize circumstances providing for increased exposure to errors and frauds</li> </ul> |

## Part A introduction

|                                                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programme : Certificate Class:B.COM.1 <sup>st</sup> Year |                          | session 2021-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Subject: <b>COMMERCE (Business regulatory Framework)</b> |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1                                                        | CourseCode               | <b>C1 COMA 2T</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2                                                        | Course Title             | Business regulatory Framework (PAPER 2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3                                                        | Course Type              | Core                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4                                                        | Pre-requisite            | Not required (open for all)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5                                                        | Course Learning Outcomes | <p>The outcome of this course is to provide the students with practical legal knowledge of general business law issues. To Understand the Essentials of A Valid Contract, The Laws Of The Act, Consideration And The Various Modes Of Discharge Of A Contract To Explain the Various Laws with Regard to The Sale of Goods and Performance of a Sale Contract and Remedial Measures, to Familiarize the Students with The Various Law with Regard to Consumer Protection in India And the Functions of Various Consumer Forums and, to Understand the Meaning and The Various Legislations with Regard to The Cyber Laws</p> |