**BHARATHIAR UNIVERSITY:COIMBATORE 641 046**

**B. Sc. Mathematics Curriculum (Affiliated Colleges)**

**(CBCS PATTERN)**

(*For the students admitted from the academic year* ***2022-2023****and onwards*)

**Scheme of Examination**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Part** | **Title of the Course** | **Hours/ Week** | **Examination** | | | | **Credits** |
| **Duration**  **in Hours** | **Maximum Marks** | | |
| **CIA** | **CEE** | **Total** |
|  | **Semester I** | | | | | | |
| I | Language - I | 6 | 3 | 50 | 50 | 100 | 4 |
| II | English - I | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper I - Classical Algebra | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper II-Calculus | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Allied A : Paper I Chosen by the college | 7 | 3 | 50 | 50 | 100 | 4 |
| IV | Environmental Studies\* | 2 | 3 | - | 50 | 50 | 2 |
|  | **Total** | **30** |  | **250** | **300** | **550** | **22** |
|  | **Semester II** | | | | | | |
| I | Language – II | 6 | 3 | 50 | 50 | 100 | 4 |
| II | English – II | 4 | 3 | 25 | 25 | 50**@@** | 2 |
| II | Effective English :Language Proficiency for Employability  <http://kb.naanmudhalvan.in/Special:Filepath/Cambridge_Course_Details.pdf> | 2 | - | 25 | 25 | 50**##** | 2 |
| III | Core Paper III - Analytical Geometry | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper IV-Trigonometry, Vector Calculus and Fourier Series | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Allied A: Paper II Chosen by the College | 7 | 3 | 50 | 50 | 100 | 4 |
| IV | Value Education – Human Rights\* | 2 | 3 | - | 50 | 50 | 2 |
|  | **Total** | **30** |  | **250** | **300** | **550** | **22** |
|  | **Semester III** | | | | | | |
| I | Language – III | 6 | 3 | 50 | 50 | 100 | 4 |
| II | English – III | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper V- Differential Equations and Laplace Transforms. | 3 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper VI- Statics | 3 | 3 | 50 | 50 | 100 | 4 |
| III | Allied B : Paper I – Chosen by the college | 7 | 3 | 30 | 45 | 75 | 3 |
| IV | Skill based Subject - Operations Research -I | 3 | 3 | 25 | 25 | 50**@@** | 2 |
| IV | Digital Skills for Employability | - | - | 25 | 75 | 100 | 2 |
| IV | Tamil\*\* / Advanced Tamil\* (OR) Non-major elective - I (Yoga for Human Excellence)\* / Women’s Rights\* | 2 | 3 |  | 50 | 50 | 2 |
|  | **Total** | **30** |  | **280** | **395** | **675** | **25** |
|  | **Semester IV** | | | | | | |
| I | Language – IV | 5 | 3 | 50 | 50 | 100 | 4 |
| II | English – IV | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper VII-Dynamics | 3 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper VIII- Programming in C  Core Paper VIII -Programming in C Practical | 2 | 3 | 30 | 45 | 75 | 3 |
| III | 1 | 3 | 10 | 15 | 25 | 1 |
| III | Allied B - Paper II  Chosen by the college | 5 | 3 | 30 | 45 | 75 | 3 |
| III | Allied B - Paper II  Chosen by the college (For Practical Paper ) | 2 | 3 | 25 | 25 | 50 | 2 |
| IV | Skill based Subject - Operations Research – Paper II | 3 | 3 | 25 | 25 | 50**@@** | 2 |
| IV | Office Fundamentals :Digital Skills for Employability  <http://kb.naanmudhalvan.in/Special:Filepath/Microsoft_Course_Details.xlsx> | 2 | - | 25 | 25 | 50**##** | 2 |
| IV | Tamil\*\*/Advanced Tamil\* (OR) Non-major elective -II (General Awareness\*) | 2 | 3 |  | 50 | 50 | 2 |
|  | **Total** | **30** |  | **295** | **380** | **675** | **27** |
|  | **Semester V** | | | | | | |
| III | Core Paper IX-Real Analysis-I | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper X- Complex Analysis-I | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XI- Modern Algebra-I | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XII- Discrete Mathematics | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Elective I | 5 | 3 | 30 | 45 | 75 | 3 |
| IV | Skill based Subject - Operations Research - Paper III | 3 | 3 | 25 | 25 | 50**@@** | 2 |
| IV | Computational Intelligence for Employability | - | - | 25 | 75 | 100 | 2 |
|  | **Total** | **30** |  | **280** | **345** | **625** | **23** |
|  | **Semester VI** | | | | | | |
| III | Core Paper XIII - Real Analysis-II | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XIV - Complex Analysis-II | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XV -Modern Algebra-II | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Elective II | 5 | 3 | 30 | 45 | 75 | 3 |
| III | Elective III | 5 | 3 | 50 | 50 | 100 | 4 |
| IV | Skill Based Subject - Operations Research- Paper IV | 3 | 3 | 25 | 25 | 50**@@** | 2 |
| IV | Project Based learning 2-Advanced Platform Technology -(Govt(auto) & Govt (Non-Auto)) /  Data Analytics & Visualization -Aided (Non-auto) & SF(Non-Auto)  <http://kb.naanmudhalvan.in/Bharathiar_University_(BU)> | 2 | - | 25 | 25 | 50**##** | 2 |
| V | Extension Activities \*\* / Swachh Bharath **@** |  |  | 50 |  | 50 | 2 |
|  | **Total** | **30** |  | **330** | **295** | **625** | **25** |
|  | **Grand Total** | **180** |  | **1685** | **2015** | **3700** | **144** |
| **#All computer papers have theory and practical exams** | | | | | | | |
| **Theory** | |  |  | **30** | **45** | **75** | **100** |
| **Practicals** | |  |  | **10** | **15** | **25** |
| ***Note*** | | | | | | | |
| **##** Naan Mudhalvan –Courses- external 25 marks will be assessed by Industry and internal will be offered by respective course teacher. | | | | | | | |
| \* No Continuous Internal Assessment (CIA). Only University Examinations | | | | | | | |
| \*\* \*\* No University Examinations. Only Continuous Internal Assessment (CIA). | | | | | | | |
| **@**Swachh Bharath Internship Scheme (SBIS) is to be added for 2 credits in the extension  activities. | | | | | | | |
| **@@**University semester examination will be conducted for 50 marks (As per existing pattern of Examination) and it will be converted for 25 marks. | | | | | | | |
| **Allied Subjects(Colleges can choose any two subjects)** | | | | | | | |
| **1.Physics 2. Chemistry3.Accountancy 4.Statistics.** | | | | | | | |
| **List of Elective papers** | | | | | | | |
| **(Colleges can choose any one of the paper as electives)** | | | | | | | |
| **Elective – I** | | **A** | Astronomy- I | | | | |
| **B** | Numerical -Methods-I | | | | |
| **Elective – II** | | **A** | Astronomy—II | | | | |
| **B** | Numerical Methods-II | | | | |
| **Elective – III** | | **A** | Graph Theory | | | | |
| **B** | Automata Theory & Formal Languages | | | | |
| **C** | Programming in C++ **#** | | | | |
| **D** | Number Theory | | | | |
| **E** | Introduction to Industry 4.0 | | | | |