**BHARATHIAR UNIVERSITY::COIMBATORE 641 046**

**B. Sc. Mathematics (C.A) 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](http://kb.naanmudhalvan.in/Special%3AFilepath/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-Programming in C | 3 | 3 | 30 | 45 | 75 | 3 |
| III | Core paper-IV- Programming in C Practical | 2 | 3 | 10 | 15 | 25 | 1 |
| 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** |  | **240** | **310** | **550** | **22** |
|  | **Semester III** |
| I | Language - III  | 4 | 3 | 50 | 50 | 100 | 4 |
| II | English - III  | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper V- Trigonometry, Vector Calculus &Fourier Series | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper VI - Programming in C++ | 3 | 3 | 30 | 45 | 75 | 3 |
| III | Core Paper VI-Programming in C++ Practical | 2 | 3 | 10 | 15 | 25 | 1 |
| III | Allied B -Paper I Physics I/ Chemistry I Paper I -**Practical** | 5 | 3 | 30 | 45 | 75 | 3 |
| 2 | - | - | - | - | - |
|  (Or)-Accountancy-I | 7 | 3 | 50 | 50 | 100 | 4 |
| 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** |  | **270** | **405** | **675** | **25** |
|  | **Semester IV** |
| I | Language - IV  | 4 | 3 | 50 | 50 | 100 | 4 |
| II | English - IV  | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper VII- Differential Equations and Laplace Transforms. | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper VIII- RDBMS ORACLE  | 3 | 3 | 30 | 45 | 75 | 3 |
| III | Core Paper VIII -RDBMS ORACLE Practical  | 1 | 3 | 10 | 15 | 25 | 1 |
| III | Allied B - Paper II Physics II / Chemistry IIPaper II- Practical  | 5 | 3 | 30 | 45 | 75 | 3 |
| 2 | 3 | 25 | 25 | 50 | 2 |
| (Or)-Accountancy-II | 7 | 3 | 50 | 50 | 100 | 4 |
| 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](http://kb.naanmudhalvan.in/Special%3AFilepath/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- Modern Algebra-I | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XI- Complex Analysis | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XII- Visual Basic  | 4 | 3 | 30 | 45 | 75 | 3 |
| III | Core Paper XII Visual Basic Practical | 2 |  3 | 10 | 15 | 25 | 1 |
| III | Elective I | 4 | 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** |  | **270** | **355** | **625** | **23** |
|  | **Semester VI** |
| III | Core Paper XIII - Real Analysis-II  | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XIV - Modern Algebra-II | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper XV - Internet Java Programming | 4 | 3 | 30 | 45 | 75 | 3 |
| III | Core Paper XV -Internet Java Programming Practical  | 2 | 3 | 10 | 15 |  25 | 1 |
| III | Elective II | 4 | 3 | 30 | 45 | 75 | 3 |
|  | 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)](http://kb.naanmudhalvan.in/Bharathiar_University_%28BU%29) | 2 | - | 25 | 25 | 50**##** | 2 |
| V | Extension Activities \*\* / Swachh Bharath **@** |  |  | 50 | - | 50 | 2 |
|  | **Total** | **30** |  | **320** | **305** | **625** | **25** |
|  | **Grand Total** | **180** |  | **1645** | **2055** | **3700** | **144** |
| ***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.Chemistry 3.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 |
| **C** | Graph Theory |
| **Elective – II** | **A** | Astronomy—II |
| **B** | Numerical Methods-II |
| **C** | Digital Electronics &Computer Fundamentals |
| **Elective – III** | **A** | Automata Theory & Formal Languages |
| **B** |  Fuzzy logic and Neural Networks  |
| **C** |  Number Theory  |
| **D** |  Discrete Mathematics  |
| **E** | Introduction to Industry 4.0 |