**BHARATHIAR UNIVERSITY:: COIMBATORE 641046**

**B.Sc PHYSICS with COMPUTER APPLICATIONS Curriculum**

**(Affiliated Colleges)**

**Program Code:26D**

*(For the students admitted during the academic year 2022– 23)*

Revised Scheme of Examination

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Part | **Course Code** | | **Title of the Course** | **Credits** | **Hours/week** | | | **Maximum Marks** | | | |
| **Theory** | | **Practical** | **CIA** | | **CEE** | **Total** |
|  | **FIRST SEMESTER** | | | | | | | | | | |
| I | 11T | Language: Tamil -I | | 4 | 6 | | - | 50 | | 50 | 100 |
| II | 12E | English-I | | 4 | 6 | | - | 50 | | 50 | 100 |
| III | 13A | Core I – Mechanics, Properties of Matter and sound | | 4 | 6 | | - | 50 | | 50 | 100 |
| III | - | Core Practical I | | - | - | | 3 | - | | - | - |
| III | 1AA 1AH | Allied Mathematics I \* (or) Allied Chemistry I \*\* | | 4 3 | 7 4 | | - - | 50 30 | | 50 45 | 100 75 |
| III | - | Allied Chemistry Practical \*\* | | - | - | | 3 | - | | - | - |
| IV | 1FA | Environmental Studies # | | 2 | 2 | | - | - | | 50 | 50 |
|  | **Total** | | | **18** | 27 | | 3 |  | |  | **450** |
|  | **SECOND SEMESTER** | | | | | | | | | | |
| I | 21T | | Language-II | 4 | 6 | | - | 50 | | 50 | 100 |
| II | 22E | | English-II | 2 | 4 | | **-** | 25 | | 25 | 50 |
| II | 2NM | | Effective English: Language Proficiency for Employability ##  http://kb.naanmudhalvan.in/Bharathiar\_University\_(BU) | 2 | 2 | | - | 25 | | 25 | 50 |
| III | 23A | | Core II - Heat and Thermodynamics | 4 | 6 | |  | 50 | | 50 | 100 |
| III | 23P | | Core Practical I | 4 | - | | 3 | 50 | | 50 | 100 |
| III III | 2AA 2AH | | Allied Mathematics II \* (or) Allied Chemistry II \*\* | 4 3 | 7 4 | | - - | 50 30 | | 50 45 | 100 75 |
| III | 2PH | | Allied Chemistry Practical \*\* | 2 | - | | 3 | 25 | | 25 | 50 |
| IV | 2FB | | Value Education - Human Rights # | 2 | 2 | | - | - | | 50 | 50 |
|  | **Total** | | | **22** | 27 | | 3 |  | |  | **550** |
|  | **THIRD SEMESTER** | | | | | | | | | | |
| I | 31T | | Language-III | 4 | 6 | | - | 50 | | 50 | 100 |
| II | 32E | | English-III | 4 | 6 | | - | 50 | | 50 | 100 |
| III | 33A | | Core III – Optics | 4 | 4 | | - | 50 | | 50 | 100 |
| III | - | | Core Practical II | - | - | | 2 | - | | - | - |
| III III | 3AA 3AH | | Allied Mathematics I \* (or) Allied Chemistry I \*\* | 4 3 | 7 4 | | - - | 50 30 | | 50 45 | 100 75 |
| III | - | | Allied Chemistry Practical \*\* | - | - | | 3 | - | | - | - |
| IV | 3ZA | | Skill Based Subject – MS Office | 3 | 3 | | - | 30 | | 45 | 75 |
| IV | 3NM | | Microsoft Office Essentials: Digital Skills for Employability ##  <http://kb.naanmudhalvan.in/Bharathiar_University(BU)> | 2 | 2 | | - | 25 | | 25 | 50 |
| IV | 3FC | | Tamil @ / Advanced Tamil # (OR) Non-major elective - I (Yoga for Human Excellence) # / Women's Rights # | 2 | 2 | | - | - | | 50 | 50 |
|  | **Total** | | | **20+2** | 25 | | 5 |  | |  | **550** |
|  | **FOURTH SEMESTER** | | | | | | | | | | |
| I | 41T | | Language-IV | 4 | 6 | | - | 50 | | 50 | 100 |
| II | 42E | | English-IV | 4 | 6 | | - | 50 | | 50 | 100 |
| III | 43A | | Core IV – Atomic Physics and Spectroscopy | 4 | 4 | | - | 50 | | 50 | 100 |
| III | 43P | | Core Practical II | 3 | - | | 2 | 30 | | 45 | 75 |
| III | 4AA or  4AH | | Allied Mathematics II \* (or)  Allied Chemistry II \*\* | 4  3 | 7  4 | |  | 50 30 | | 50 45 | 100 75 |
| III | 4PH | | Allied Chemistry Practical \*\* | 2 | - | | 3 | 25 | | 25 | 50 |
| IV | 4ZB | | Skill Based Subject – Principles of programming concepts and C programming | 2 | 3 | | - | 25 | | 25 | 50 |
| IV | 4NM | | Office Fundamentals: Digital Skills for Employability ##  <http://kb.naanmudhalvan.in/Bharathiar_University_(BU)> | 2 | 2 | | - | 25 | | 25 | 50 |
| IV | 4FE | | Tamil @ /Advanced Tamil # (or) Non-Major Elective - II (General Awareness #) | 2 | 2 | | - | - | | 50 | 50 |
|  | **Total** | | | **26** | 27 | | 5 |  | |  | **650** |
| **FIFTH SEMESTER** | | | | | | | | | | | |
| III | 53A | | Core V – Mathematical Physics | 4 | 5 | | - | 50 | 50 | | 100 |
| III | 53B | | Core VI – Applied Electronics | 4 | 4 | | - | 50 | 50 | | 100 |
| III | 53C | | Core VII – Solid State Physics | 4 | 5 | | - | 50 | 50 | | 100 |
| III | 53D | | Core VIII – Electricity and Magnetism | 4 | 4 | | - | 50 | 50 | | 100 |
| III | 63P | | Core Practical III - Electronics | - | - | | 2 | - | - | | - |
| III | 63Q | | Elective Practical : Digital and  Microprocessor | - | - | | 2 | - | - | | - |
| III | 5EA | | Elective – I Principles of Digital electronics and microprocessor | 3 | 4 | | - | 30 | 45 | | 75 |
| III | 6ZP | | Skill Based Practical : Programming in C and C++ and MS Office | - | - | | 2 | - | - | | - |
| IV | 5NM | | Technical Skills for Employability ## Fundamentals of Data Analytics with Tableau  <http://kb.naanmudhalvan.in/Bharathiar_University_(BU)> | 2 | 2 | | - | 25 | 25 | | 50 |
| IV | 5ZC | | Skill based Subject : Object Oriented Programming in C++ | 3 | 3 | | - | 30 | 45 | | 75 |
|  | **Total** | | | **22+2** | 27 | | 6 |  |  | | **600** |
| **SIXTH SEMESTER** | | | | | | | | | | | |
| III | 63A | | Core IX – Quantum Mechanics and Relativity | 4 | | 5 | - | 50 | 50 | | 100 |
| III | 63B | | Core X - Nuclear Physics | 4 | | 4 | - | 50 | 50 | | 100 |
| III | 63C | | Core XI- Numerical methods | 4 | | 5 | - | 50 | 50 | | 100 |
| III | 63D | | Core XII-Fundamental of Nanomaterials | 4 | | 4 | - | 50 | 50 | | 100 |
| III | 63P | | Core Practical III - Electronics | 4 | | - | 3 | 50 | 50 | | 100 |
| III | 6EA | | Elective – II MATLAB | 3 | | 3 | - | 30 | 45 | | 75 |
| III | 63Q | | Elective Practical - Digital and  Microprocessor | 3 | | - | 2 | 30 | 45 | | 75 |
| IV | 6ZP | | Skill based Subject Practical – Programming in C and C++ and MS Office | 2 | | - | 2 | 25 | 25 | | 50 |
| IV | 6NM | | Advanced Platform Technology ## - (Physics, Electronics, Mathematics, Statistics, Data Science) - Govt(auto) & Govt (Non-Auto)  Data Analytics with Advanced Tools ## - (Physics, Electronics, Mathematics, Statistics, Data Science) - Aided (Non-auto) & SF (Non-Auto)  <http://kb.naanmudhalvan.in/Bharathiar_University_(BU)> | 2 | | - | 2 | 25 | 25 | | 50 |
| V | 67A | | Extension Activities @ | 2 | | - | - | 50 | - | | 50 |
|  | **Total** | | | **32** | | 21 | 9 |  |  | | **800** |
|  | **Grand Total** | | | **140+4** | |  |  |  |  | | **3600** |

\*For subjects without practical

\*\* For subjects with practical

@ No University Examinations. Only Continuous Internal Assessment (CIA)

#No Continuous Internal Assessment(CIA). Only University Examinations

## For Naan Mudhalvan Courses\

|  |  |  |
| --- | --- | --- |
| **LIST OF ELECTIVE PAPERS**  **(Colleges can choose any one of the papers from each section as electives)** | | |
| Elective – I | **A** | Principles of Programming Concepts and C Programming |
| **B** | Energy Physics |
| **C** | Agricultural Physics |
| Elective – II | **A** | Digital and Microprocessor |
| **B** | Optical Fibers and Fiber Optic Communication Systems |
| **C** | Bio-Physics |
| Elective - III | **A** | Object Oriented Programming with C++ |
|  | **B** | Geo Physics |
| **C** | Industry Automation & Its Applications **(Industry 4.0)** |

# LIST OF VALUE-ADDED COURSES (OPTIONAL)

**(Only Internal and no external exam – 100 Marks)**

* OPTOELECTRONICS
* NON–DESTRUCTIVE TESTING
* BIOMEDICAL INSTRUMENTATION
* MODERN DISPLAY DEVICES AND STORAGE MATERIALS