**M.Sc. Immunology**

**KAHER’s Dr. Prabhakar Kore Basic Science Research Center [BSRC]**

**J. N. Medical College, KLE Academy of Higher Education and Research, Belagavi**

**Duration: 2 years [4 Semesters]**

**Eligibility:**

Candidates must have B.Sc (Honors) in Physiology, Zoology, Biochemistry, Biotechnology, and Microbiology or in any branches of Biology, along with Chemistry as a Pass subject, from any recognized University.

**Proposed Intake of Students:** **20**

**Proposed Syllabus:**

**M.Sc. Immunology**

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| **Semester I:**  **300 Marks** | | **Semester II:**  **300 Marks** | | **Semester III:**  **300 Marks** | | **Semester IV:**  **300 Marks** | | **Total Marks:**  **1200** | |
| Theory | Practical | Theory | Practical | Theory | Practical | Theory | Practical | Theory | Practical |
| 160 | 140 | 160 | 140 | 160 | 140 | 160 | 140 | 640 | 560 |

**FIRST SEMESTER: 300 MARKS**

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| **Theory / Practical** | **Paper** | **Unit** | **Name** | **Marks** | **Lecture** |
| THEORY | Paper – I  Paper – II | 01  02  03  04 | Basic Immunology  Cell & Molecular Biology  Stem Cell Immunology & Gene Therapy  Recombinant DNA Technology & Tissue Culture | 40  40  40  40 | 30L  33L  21L  20L |
| PRACTICAL  (Research oriented experiments) | Paper – III | 05  06 | Basic Immunology, Cell & Molecular Biology.  Stem Cell Immunology & Gene Therapy, Tissue Culture, Recombinant DNA Technology | 70  70 | 20L  20L |

**SECOND SEMESTER: 300 MARKS**

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| **Theory / Practical** | **Paper** | **Unit** | **Name** | **Marks** | **Lecture** |
| THEORY | Paper – IV  Paper – IV | 07  08  09  10 | Clinical Immunology & Immunohematology Infection & Immunity  Basic & Clinical Biochemistry  Genomics & Proteomics | 40  40  40  40 | 26L  24L  24L  16L |
| PRACTICAL  experiments) | Paper – VI | 11  12 | Clinical Immunology, Immuno-hematology and Infection & Immunity  Basic & Clinical Biochemistry,  Genomics & Proteomics | 70  70 | 20L  20L |

**THIRD SEMESTER: 300 MARKS**

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| **Theory / Practical** | **Paper** | **Unit** | **Name** | **Marks** | **Lecture** |
| THEORY | Paper – VII  Paper – VIII | 13  14  15  16 | Immuno-regulation & cytokines  Advanced Immunology  Immunological Technique & Methodology (Instrumentation)  Review Paper | 40  40  40  40 | 20L  25L  24L  24L |
| PRACTICAL | Paper – IX | 17  18 | Immuno-regulation & Cytokines and Advanced Immunology  Enzymology and Instrumentation | 70  70 | 20L  20L |

**FOURTH SEMESTER: 300 MARKS**

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| **Theory / Practical** | **Paper** | **Unit** | **Name** | **Marks** | **Lecture** |
| THEORY | Paper – X | 19 | Biostatistics & Computer Application in Biology | 40 | 20L |
| Paper – XI | 20 | Immunological Disease Management | 40 | 20L |
| PRACTICAL | Paper – XII | 21, 22 | Biostatistics and Computer Application | 80 | 20L |

Unit: 23,24 – 100 Marks: Project Work: Duration Six Months