



GOVERNMENT OF JAMMU & KASHMIR
SHER-I-KASHMIR INSTITUTE OF MEDICAL SCIENCES
SOURA SRINAGAR

**Syllabus for Assistant Professor Posts of
the Department of Clinical Immunology
& Rheumatology,
SKIMS, SOURA.**

**GOVERNMENT OF JAMMU & KASHMIR
SHER-I-KASHMIR INSTITUTE OF MEDICAL SCIENCES
DEPARTMENT OF CLINICAL IMMUNOLOGY AND RHEUMATOLOGY**

Subject: Syllabus for the post of Assistant Professor Recruitment Examination.

1. Basic Sciences

- Immunology: Innate and adaptive immunity, immune tolerance, autoimmunity, HLA system, cytokines, complement, antigen presentation, immunogenetics.
- Musculoskeletal biology: Bone, cartilage, synovium, muscle, tendon and enthesis biology.
- Molecular medicine: Signal transduction, apoptosis, epigenetics, biomarkers, precision medicine.

2. Clinical Rheumatology

Inflammatory Arthritis

- Rheumatoid arthritis
- Spondyloarthritis (Ankylosing spondylitis, Psoriatic arthritis, Reactive arthritis, Enteropathic arthritis)
- Juvenile idiopathic arthritis

Connective Tissue Diseases

- Systemic lupus erythematosus and lupus nephritis
- Systemic sclerosis
- Idiopathic inflammatory myopathies
- Sjögren syndrome
- Mixed and undifferentiated connective tissue diseases
- Antiphospholipid syndrome

Vasculitis

- Large, medium and small vessel vasculitis
- ANCA-associated vasculitis
- Behçet disease and other variable vessel vasculitides

Crystal and Degenerative Disorders

- Gout and CPPD disease
- Osteoarthritis

Autoinflammatory Disorders

- Familial Mediterranean fever
- TRAPS
- CAPS
- DADA2 deficiency
- Adult-onset Still's disease
- VEXAS syndrome

m read

3. Clinical Immunology

- Mechanisms of autoimmunity
- Autoantibodies and autoimmune diseases
- Primary and secondary immunodeficiency disorders
- Hypersensitivity reactions and allergy
- Drug-induced autoimmune diseases
- Transplant immunology

4. Diagnostic Rheumatology

Laboratory Evaluation

- ANA and ANA patterns
- ENA profile
- Anti-dsDNA
- RF and Anti-CCP
- ANCA
- Antiphospholipid antibodies
- Complement assays
- HLA typing
- Biomarkers in rheumatic diseases

Imaging and Procedures

- Conventional radiology
- Musculoskeletal ultrasonography
- MRI and CT
- PET-CT
- Nailfold capillaroscopy
- Synovial, muscle and renal biopsy interpretation

5. Therapeutics

Conventional DMARDs

- Methotrexate
- Sulfasalazine
- Leflunomide
- Hydroxychloroquine
- Azathioprine
- Mycophenolate mofetil
- Cyclophosphamide

Advanced Therapies

- Biologic DMARDs (TNF, IL-6, IL-17, IL-23 inhibitors, Rituximab, Abatacept, Belimumab, Anifrolumab)
- Targeted synthetic DMARDs (JAK and TYK2 inhibitors)
- Glucocorticoids and immunosuppressive therapy
- Emerging therapies including CAR-T cell therapy and stem-cell transplantation

M. Ahmad

6. Special Topics

- Rheumatologic emergencies (MAS, CAPS, diffuse alveolar hemorrhage, scleroderma renal crisis, septic arthritis)
- Pregnancy and rheumatic diseases
- Vaccination in rheumatic diseases
- Tuberculosis, viral hepatitis and HIV in rheumatology
- Rheumatic manifestations of systemic diseases
- Interstitial lung disease and pulmonary hypertension associated with rheumatic diseases

7. Research Methodology and Biostatistics

- Study designs and clinical trials
- Systematic reviews and meta-analysis
- Sample size estimation
- Relative risk, odds ratio and hazard ratio
- Survival analysis and regression models
- Interpretation of p-values and confidence intervals
- Evidence-based medicine
- Research ethics and Good Clinical Practice (GCP)

8. Disease Activity and Outcome Measures

- DAS28, CDAI, SDAI, RAPID3
- BASDAI, ASDAS
- SLEDAI, BILAG
- BVAS
- HAQ-DI
- SF-36

9. ACR/Eular Guidelines for management of Rheumatic diseases.

10. Recent Advances in Clinical Immunology & Rheumatology

M. Ahmad