

**CLINICAL IMMUNOLOGY AND RHEUMATOLOGY**

**PAPER-I**

Time: 3 hours  
Max. Marks:100

RHM/D/20/43/I

**Important Instructions:**

- *You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.*
- *Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.*
- *No additional supplementary answer sheet booklet will be provided.*
- *Attempt all questions in order.*
- *Each question carries 10 marks.*
- *Read the question carefully and answer to the point neatly and legibly.*
- *Do not leave any blank pages between two answers.*
- *Indicate the question number correctly for the answer in the margin space.*
- *Answer all the parts of a single question together.*
- *Start the answer to a question on a fresh page or leave adequate space between two answers.*
- *Draw table/diagrams/flowcharts wherever appropriate.*

**Write short notes on:**

1. Discuss development of synovial joint. What are the sources of nutrition for articular cartilage? 6+4
2. Discuss the structure and function of skeletal muscle. Write short note on excitation-contraction coupling. (3+2)+5
3. Discuss different types of antigen presenting cells. Discuss the dendritic cell based therapy of arthritis. 5+5
4. Discuss different dendritic cell subsets and the role they play in Rheumatic disease. 3+7
5. Discuss about pro-inflammatory and regulatory monocytes. Draw flow diagram of autophagy pathway. 5+5
6. Mechanism of calcineurin inhibitors and their role in lupus. 4+6
7. Differences between diagnostic and classification criteria and its implication. Write short note on over-diagnosis and over-treatment. 7+3
8. Write about proteinases and their role in RA and OA. 5+5
9. Discuss IL-6 physiology and its implication in Rheumatic disease. Discuss anti IL-6 trials in systemic sclerosis. 6+4
10. What is meta-analysis and what are the steps in doing it? Write short note on Forest plot. 7+3

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