

**RHEUMATOLOGY**

PAPER-I

RHM/D/18/43/I

Time: 3 hours

Max. Marks:100

**Important Instructions:**

- *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. What is the structure, function and composition of articular cartilage? How do chondrocytes obtain nutrition as cartilage is an avascular structure? 7+3
2. How is bone homeostasis maintained using osteoblast signaling and osteoclast signaling? 5+5
3. List the mechanisms involved in female bias seen in autoimmune disease. How do these mechanisms lead to increased response to self-antigens? 3+7
4. Compare and contrast case control and cohort studies. If you want to study risk factors for lymphoma in autoimmune disease, what type of study would you plan and why? 6+4
5. Discuss the different types of innate immune receptors. What are their exogenous and endogenous ligands? 5+5
6. Discuss mechanism of action of glucocorticoids. What is the mechanism of action of high dose intravenous methylprednisolone? 7+3
7. Draw structure of synovio-entheseal complex. Discuss pathogenesis of enthesitis. Write one enthesitis score. 3+4+3
8. How is immune homeostasis restored by Regulatory T cells and regulatory macrophages? 5+5
9. Describe the components of needle EMG. Mention the clinical indications for ordering EMG. What are the differences between neuropathic and myopathic patterns? 4+2+4
10. What are the proposed mechanism of action of intravenous immunoglobulin? What are the major indications in Rheumatology where it is used and what are the results? 5+5

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