### 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:

<p>| | |</p>
<table>
<thead>
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<tr>
<td>1.</td>
<td>Definition of asthma and methods used for epidemiological surveys of this disorder. 2+8</td>
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| 2. | a) Anti-neutrophilic cytoplasmic antibodies (ANCA).  

  b) Importance of ANCA in respiratory diseases. 7+3 |
| 3. | a) What are small airways?  

  b) Tests utilized in the detection of small airways dysfunction. 4+6 |
| 4. | a) Molecular targets used in the treatment of lung cancer.  

  b) Principles of gene therapy in lung cancer. 5+5 |
| 5. | a) Define chylothorax and enumerate its causes.  

  b) Anatomy and physiology of thoracic duct. (2+2)+6 |
| 6. | a) Co-oximetry.  

  b) Principles of pulse oximetry.  

  c) Factors affecting the oxyhemoglobin dissociation curve. 3+4+3 |
| 7. | Alveolar macrophages: their morphology and functions. 5+5 |
| 8. | a) Enlist the anomalies of pulmonary vasculature.  

  b) Scimitar syndrome: Etiopathogenesis and its clinicoradiological presentation. 3+(3+4) |
| 9. | Pathogenesis of respiratory failure during sleep. 10 |
| 10. | Enumerate the molecular methods for diagnosis of tuberculosis and describe their clinical utility. 4+6 |

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POSSESSION / USE OF CELL PHONES OR ANY SUCH ELECTRONIC GADGETS IS NOT PERMITTED INSIDE THE EXAMINATION HALL.