

**RESPIRATORY DISEASES**

**PAPER – I**

Time : 3 hours

RPD/D/17/D/42/I

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. | a) Structure of surfactant proteins.<br>b) Functions of surfactant proteins.<br>c) Regulation of surfactant production.                            | 2+5+3                |
| 2. | a) Oxygen dissociation curve.<br>b) Alteration of oxygen affinity.<br>c) Bohr Effect.  | 5+3+2                |
| 3. | a) Diffusion capacity of carbon monoxide (DLCO).<br>b) Factors influencing diffusion capacity.   | 5+5                  |
| 4. | a) Respiratory contribution to acid-base balance.<br>b) Base excess and base deficit<br>c) Hyperchloraemic acidosis.                               | 5+3+2                |
| 5. | a) Morphology of emphysema.<br>b) Risk factors for COPD.   | 5+5                  |
| 6. | a) Cells of the immune system in asthma.<br>b) Molecular mediators in asthma.  | 5+5                  |
| 7. | a) Aerosol delivery during invasive mechanical ventilation.<br>b) Pulmonary toxicities associated with anti-rheumatic and anti-inflammatory drugs. | 5+5                  |
| 8. | a) Physiologic changes in respiratory system in pregnancy.<br>b) Sleep disordered breathing and pregnancy.   | 6+4                  |
| 9. | a) Clinical and molecular characteristics of lung cancer in smokers and non smokers.<br>b) EGFR mutations in non-small cell lung cancer.           | 5+5<br><b>P.T.O.</b> |

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10.    a) Research design. 2+3+2+3  
      b) Observational study.  
      c) Meta analysis.  
      d) Cohort Study.

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