# I Year B.Tech Medical Biotechnology Semester II

**Subject:** Human Physiology  
**Course Code:** MB- 202  
**Faculty:** Dr. Ashima Bhan

<table>
<thead>
<tr>
<th>Unit</th>
<th>Topics</th>
<th>No Of Lectures</th>
<th>Lecture Serial No</th>
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</table>
| **Unit-1 Basic concepts and principles** | • Introduction and background (homeostasis, control systems)  
• Biophysics of blood flow Regulation of respiration  
• Auto regulation of renal blood flow and the concept of clearance | 3  
1  
2 | 3  
4  
6 |
| **Unit-2 Sensory Organs** | • Eye and Ear  
• Nose and Tongue  
• Skin: Functions & Disorders | 1  
1  
2 | 7  
8  
10 |
| **Unit -3 Digestive System** | • Functions & Disorders of Pharynx, oesophagus  
• Functions & Disorders of Stomach and Intestines  
• Functions & Disorders of Liver & Pancreas, Peritoneum | 1  
2  
2 | 11  
13  
15 |
| **Unit -4 Circulatory System** | • Heart rate and the significance  
• Cardiac cycle, HR factors  
• ECG- Machine, Recording,  
• Abnormalities types  
• Causative Factors  
• Reporting & Interpretation | 1  
1  
1  
2  
1  
1 | 16  
17  
18  
20  
21  
22 |
| **Unit -5 Respiratory System** | • Respiration, and Mechanism  
Inspiration, Expiration  
• Gas exchange mechanism Lung surfactant, compliance Lung volume and capacity  
• Respiratory Exercises | 1  
3  
1 | 23  
26  
27 |
### Books recommended:

1. Textbook of Medical Physiology by C. Guyton.
2. Physiology by C. Chatterjee.
3. Human Anatomy & Physiology by Tortora.
6. Medical physiology by Chaudhary.
8. Human Anatomy and Physiology by Creager.

### Evaluation Scheme (Theory)

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<thead>
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<th>S. No.</th>
<th>Examination</th>
<th>Time</th>
<th>Marks</th>
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<td>45 Minutes</td>
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<td>Duration</td>
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</tr>
<tr>
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<td>End Semester Exam</td>
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