

**Units of Syllabus to be included in Section - A and Section – B Question Papers of  
UTU Examination as per INC & UTU Syllabus.**

**I Year P. B. B. Sc. (N)**

**Paper –Microbiology (030150105)**

**Section – I**

<b>Unit</b>	<b>Learning Objectives</b>	<b>Hrs.</b>	<b>Marks</b>	<b>Remark</b>
<b>I</b>	<ul style="list-style-type: none"> <li>- Structure and Classification of Microbes.</li> <li>- Morphological types</li> <li>- Size and form of bacteria.</li> <li>- Motility.</li> <li>- Classification of Micro – organisms.</li> <li>- Identification of Micro – organisms.</li> <li>- Discussion of laboratory methods.</li> <li>- Diagnosis of bacterial diseases.</li> </ul> <p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>-Use and care of microscope.</li> <li>- Common examination: Smear, Blood, Mouldes, Yeasts.</li> <li>- Staining techniques – gram staining, acid fast staining.</li> <li>- Hanging drop preparation.</li> </ul>	<b>06</b>	<b>07</b>	
<b>II</b>	<ul style="list-style-type: none"> <li>- Growth and Nutrition of Microbes</li> <li>- Temperature</li> <li>- Moisture</li> <li>- Blood</li> <li>- Destruction of Micro – Organisms.</li> <li>- Sterilization and disinfection.</li> <li>- Chemotherapy and antibiotics.</li> <li>- Effects of heat and cold.</li> <li>- Hospital infection control procedure &amp; role of nurses.</li> </ul> <p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>- Preparation of Media and culture techniques.</li> <li>- Collection, Handling and transportation of various specimens.</li> <li>- Sterilization methods – physical, Chemical and Mechanical</li> </ul>	<b>10</b>	<b>14</b>	
<b>III</b>	<ul style="list-style-type: none"> <li>- Viruses.</li> <li>- Classification and general character of viruses</li> <li>- Disease caused by viruses in man and animal and their control.</li> <li>- Micro – organisms transmitted through food.</li> <li>- Food poisoning. Food borne infection</li> </ul>	<b>14</b>	<b>17</b>	
<b>Total</b>		<b>30</b>	<b>38</b>	

**Note:**

Unit I – Includes Unit – I & II of INC Syllabus.

Unit II - Includes Unit – III & IV of INC Syllabus.

Unit III - Includes Unit – IX & X of INC Syllabus.

**Section – II**

<b>Unit</b>	<b>Learning Objectives</b>	<b>Hrs.</b>	<b>Marks</b>	<b>Remark</b>
<b>I</b>	<ul style="list-style-type: none"> <li>- Disease producing micro-organisms.</li> <li>- Gram positive bacilli</li> <li>- Tuberculosis and Leprosy</li> <li>- Anaerobes</li> <li>- Cocci</li> <li>- Spirochaete</li> <li>- Rickettsiae</li> </ul> <p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>- Identification and study of the following bacteria Strep in cocci, pneumococci and gonococci.</li> <li>Enteric bacteria , Posting infection control department.</li> </ul>	<b>10</b>	<b>13</b>	
<b>II</b>	<ul style="list-style-type: none"> <li>- Pathogenic Fungi</li> <li>- Dermatophytes</li> <li>- Systematic Mycotic infection</li> <li>- Laboratory diagnosis of mycotic infection</li> <li>- Immunity</li> <li>- Immunity and hypersensitivity – Skin test</li> <li>- Antigen and antibody reaction</li> <li>- Immunization in disease.</li> </ul> <p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>- Demonstration of serological methods.</li> </ul>	<b>10</b>	<b>12</b>	
<b>III</b>	<ul style="list-style-type: none"> <li>- Parasites and Vectors.</li> <li>- Characteristics and classification of Parasites</li> <li>- Protozoal infection including amoebiasis.</li> <li>- Helminthes infection</li> <li>- Diagnosis of parasitic infection</li> <li>- vectors and diseases transmitted by them.</li> </ul> <p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>-Identification of Parasites and Vectors.</li> </ul>	<b>10</b>	<b>12</b>	
<b>Total</b>		<b>30</b>	<b>37</b>	

**Note:**

Unit I – Includes Unit – V of INC Syllabus.

Unit II - Includes Unit – VI & VII of INC Syllabus.

Unit III - Includes Unit –VIII of INC Syllabus.