UNIVERSITY OF THE PUNJAB

NOTIFICATION

In continuation of this office notification No. D/3328/Acad. dated 12-05-2010. It is hereby notified that the Syndicate at its meeting held on 20-03-2010 has approved the recommendations of the Academic Council, dated 16-02-2010 regarding approval of the revised Syllabi & Courses of Reading for 2 years B.Sc. (Pass Course) Examination in Biochemistry as an elective subject which will be effective from Academic Session 2010-2012.

The revised Syllabi & Courses of Reading for 2 years B.Sc. (Pass Course) Examination in Biochemistry is attached herewith vide Annexure ‘A’.

Admin Block,
Quaid-i-Azam Campus,
Lahore.
No. D/7552/Acad.

Copy of the above is forwarded to the following for information and further necessary action:

1. Dean, Faculty of Life Sciences.
2. Director, Institute of Biochemistry & Biotechnology
3. Principals of the Affiliated Colleges concerned
4. Members of the Board of Studies in Biochemistry & Biotechnology
5. Controller of Examinations
6. Deputy Controller (Computer)
7. Deputy Controller (Examinations)
8. Deputy Controller (Conduct)
9. Deputy Controller (Secrecy)
10. A.R. (Statutes)
11. Assistant Syllabus

Sd/-

Prof. Dr. Muhammad Akhtar
Registrar

Dated: 03/12/2010.

Additional Registrar (Academic)
### B.Sc Biochemistry Elective

<table>
<thead>
<tr>
<th>Paper</th>
<th>Course Title</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Biochemistry-I Theory</td>
<td>50</td>
</tr>
<tr>
<td>B</td>
<td>Biochemistry-II Theory</td>
<td>50</td>
</tr>
<tr>
<td>C</td>
<td>Biochemistry-III Theory</td>
<td>50</td>
</tr>
<tr>
<td>A</td>
<td>Biochemistry-I Lab</td>
<td>17</td>
</tr>
<tr>
<td>B</td>
<td>Biochemistry-II Lab</td>
<td>17</td>
</tr>
<tr>
<td>C</td>
<td>Biochemistry-III Lab</td>
<td>16</td>
</tr>
</tbody>
</table>

**Total: 200 Marks**

#### Paper-A: Biochemistry-I Theory

**Course Contents**


#### Recommended Books


Course Contents

Recommended Books

Paper-B: Biochemistry-II Theory

Course Contents
Amino acid deamination, transamination and oxidative deamination mechanisms, urea cycle and its regulation. Metabolic breakdown of ketogenic and glucogenic amino acids. Amino acids as biosynthetic precursors, heme biosynthesis and its degradation, biosynthesis of essential and non-essential amino acids. RNAs and their role in protein synthesis, transcription and translational processes. Chemical nature and synthesis of purine and pyrimidine ribonucleotides. Salvage pathway. Formation of

Recommended Books

Paper-B: Biochemistry-II Lab.

Course Contents
Iodine test for polysaccharides, Determination of chain length of polysaccharides, formation of sugar derivatives, fermentation of sugars by Baker’s yeast. Isolation of amylose and amylopectin from starch, extraction of glycogen from liver, acid and enzymatic hydrolysis of glycogen. Lipid composition of wheat grain, Lipid separation from brain tissue and fractionation by TLC, Effect of UV light on vitamin A. Preparation of mitochondrial fraction from heart muscles and measurement of enzyme activities like malate dehydrogenase and monoamine oxidase.

Recommended Books
Course Contents


Recommended Books

Paper-C: Biochemistry-III Lab.

Course Contents

Recommended Books