

# 2012 Scheme

QP CODE: 217006

Reg. No: .....

## **Second Year B. Pharm Degree Supplementary Examinations July 2022**

### **Applied Biochemistry & Molecular Biology**

**Time: 3 Hours**

**Total Marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Write equations wherever necessary.*

**Essay**

**(3x10=30)**

1. Explain the De novo biosynthesis of fatty acids along with the enzyme system involved.
2. Explain  $\beta$ - oxidation of palmitic acid along with the energetics.
3. Explain the general reactions involved in the amino acid metabolism.

**Short notes**

**(14x5=70)**

4. Explain the different types of RNA.
5. Explain the semi-conservative mode of replication of DNA.
6. Write the catabolism of purine nucleotides.
7. Explain competitive inhibition with examples.
8. Define the following
  - (a) Enzyme induction
  - (b) Uncouplers.
  - (c) Transcription
  - (d) Hyperbilirubinemia
  - (e) Gout
9. Explain electron transport chain.
10. Describe double helical structure of DNA.
11. Give the IUB classification of enzymes with examples.
12. Explain substrate level phosphorylation and oxidative phosphorylation.
13. Atherosclerosis.
14. Describe the hormonal regulation of blood glucose level.
15. Give the structure and biological significance of ATP and cyclic AMP.
16. Give the significance of cholesterol. How it gets converted to bile acids.
17. Define enthalpy and entropy. Explain the relationship between them.

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