

**Third Year B.Sc. Medical Biochemistry Regular/Supplementary
Examinations February 2024
Metabolism III**

(2016 Scheme)

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*
- *Draw table/diagrams/flow charts wherever necessary*

Essay**(2x15=30)**

1. Describe various steps of DNA replication. Discuss its proof reading activity.
2. Explain the De novo synthesis of pyrimidine nucleotides. Add a note on Orotic aciduria.

Short Essay**(2x10=20)**

3. Give an account of the different blotting techniques and their use
4. Explain Lac operon concept of gene expression.

Short Answers**(6x5=30)**

5. Give the sources of carbon and nitrogen atoms of purine and pyrimidine rings
6. Meselson-Stahl experiment
7. Restriction endonucleases
8. Eukaryotic Cell cycle
9. Salvage pathways of purine nucleotides
10. Effects of mutations with examples

Comment on**(10x2=20)**

11. Severe combined immunodeficiency (SCID)
12. Chargaff's rule
13. Splicing
14. Xeroderma pigmentosum
15. Wobble hypothesis
16. Ames's test to detect mutagenicity
17. Histones
18. Chimeric DNA
19. TATA (Pribnow) box
20. PCR.
