

M.D. DEGREE EXAMINATION

BRANCH XIII – BIOCHEMISTRY

**PAPER II – CELL PHYSIOLOGY, MOLECULAR BIOLOGY AND
HUMAN GENETICS**

Q.P. Code: 202044

Time: Three Hours

Maximum: 100 Marks

I. Essay Questions:

(2 x 15 = 30)

1. What are the different types of Gene therapy, various techniques, advantages and disadvantages?
2. What are the different types of DNA repair mechanism? Explain with examples when it is defective.

II. Short notes:

(10 x 5 = 50)

1. Chromatin immune precipitation and its application.
2. Microfilaments.
3. p53 gene.
4. Protein processing.
5. Aquaporins.
6. Mitochondrial DNA disorders.
7. Facilitated diffusion.
8. Biochemical genetic basis of Alzheimer's disease.
9. Biosynthesis of Glycosaminoglycans.
10. Molecular Cloning.

III. Reasoning Out:

(4 x 5 = 20)

1. Male children are affected by Duchene muscular dystrophy.
2. Separation of RNA is difficult than DNA. Explain.
3. tRNA has modified bases.
4. Epigenetic regulation in cellular differentiation.
