

Post graduation (M.D. - Biochemistry) University Theory Examination  
Government Medical College , Bhavnagar  
Paper-3 ( (Molecular Biology , Immunology and Cancer)

Date : 26/09/2025  
Marks : 100

**Q-1 Write detailed notes on the following. (20 Marks)**

- Type and role of vector and restricted endonuclease enzyme in Recombinant DNA technology.
- Explain Detection of clone colony of the bacteria after recombinant DNA process.

**Q-2 Write detailed notes on the following. (20 Marks)**

- Initiation , elongation and termination of transcription.

**Q-3 Write short notes on the following. (20 Marks)**

1. Type and Genetical basis of diversification of Immunoglobulin. Explain somatic hypermutation.
2. DNA repair mechanism and its disorder

**Q-4 Write short notes on the following. (40 Marks)**

1. Define and type of polymorphism.
2. Mechanism of adenosine in treatment of supra-ventricular tachycardia (tachyarrhythmia )
3. Effect of Theophylline and Sildenafil nitrate on molecular metabolism.
4. Lac operon
5. micro-RNA
6. Significance of BRAC gene
7. Explain “ Role of supplementary folic acid in pregnant women”
8. Type of vaccine and mechanism of vaccine