

(LI 149)

APRIL 2016

Sub. Code:2044

**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 10 = 20)**

1. What is the recombinant DNA technology, describe any one technique?
2. What is transcription? Write a note on post transcriptional modifications.

**II. Short Questions:**

**(8 x 5 = 40)**

1. Blood group antigens.
2. DNA repair mechanisms.
3. Chromosomal translocation.
4. Ion Channels.
5. Salient features genetic code.
6. Genetic basis of cystic fibrosis.
7. Michell's chemiosmotic theory.
8. Gene amplification.

**III. Reasoning Out:**

**(4 x 5 = 20)**

1. Post translational modification may not occur only after the completion of translation.
2. Role of retinoblastoma protein (RB protein) in the cell cycle.
3. Mitochondria are parasites.
4. How amelogenin helps in the mineralization of teeth?

**IV. Very Short Answers:**

**(10 x 2 = 20)**

1. Ionophores.
2. Taq Polymerase.
3. Epigenetic modifications.
4. Silent mutations.
5. Centromere.
6. Fusion protein.
7. MELAS (Mitochondrial Encephalomyopathy Lactic Acidosis and Stroke like episodes).
8. Micro RNAs.
9. Ribozymes.
10. Histones.

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