

[LH 149]

OCTOBER 2015

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

Answer ALL questions

I. Essay:

(2 x 10 = 20)

1. Describe the structure of DNA and Eukaryotic DNA replication.
2. What is recombinant DNA technology? Discuss the applications of the same.

II. Short Questions:

(8 x 5 = 40)

1. Reporter genes.
2. Active transport.
3. Mitochondria.
4. Lysosomes.
5. Micro array technique.
6. Post transcriptional processing.
7. tRNA.
8. DNA electrophoresis.

III. Reasoning Out:

(4 x 5 = 20)

1. Lagging strand is synthesized as fragments.
2. Centromere is an essential structure for chromosomal segregation during mitosis.
3. Apo B-48 protein needed for chylomicrons synthesis is produced from apo lipo protein B in the intestine. How?
4. The role of ubiquitination on misfolded proteins.

IV. Very Short Answers:

(10 x 2 = 20)

1. Sickle cell anemia.
2. Critical applications of PCR.
3. Restriction sites.
4. Cell cycle controls.
5. Chaperones.
6. Wobbling phenomenon.
7. Receptor mediated endocytosis.
8. Ionophores.
9. Telomeres.
10. DNA polymerases.
