

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 1022]

OCTOBER 2022

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 15 = 30)

1. What are the methods of separating cellular organelles? Describe the technique and mention the marker of each.
2. What is recombinant DNA technology, detail the steps with its applications?

II. Short notes:

(10 x 5 = 50)

1. Bio chemical changes in cancer cells.
2. Post Translational Modifications.
3. Point Mutation.
4. Gap junctions.
5. Glucose transporters.
6. Replication fork.
7. Endoplasmic reticulum.
8. Automated DNA sequencing
9. Membrane protein.
10. Differential centrifugation.

III. Reasoning Out:

(4 x 5 = 20)

1. Importance of pseudogene.
2. Mitochondrial disorders are inherited maternally only.
3. Role of 3' poly A tail in translation.
4. Rationale behind the administration of salt-sugar solution in acute diarrhoea.
