

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

[MPHARM 0921]

**SEPTEMBER 2021
(OCTOBER 2020 EXAM SESSION)**

Sub. Code: 2984

**M.PHARMACY DEGREE EXAMINATION
SEMESTER-I (PCI New regulations 2016)
PHARMACOLOGY - MPL
PAPER IV - CELLULAR AND MOLECULAR PHARMACOLOGY
*Q.P. Code : 262984***

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. What are vectors? Give examples. In detail explain various vectors used in rDNA technology. Add a note on application of rDNA technology.
2. What are second messengers? How it facilitate the signal transduction response? Explain the role of the following second messengers in signal transduction.
a) Cyclic AMP b) Calcium ion c) NO

II. Write notes on:

(7 x 5 = 35)

1. How cell cycle is regulated? Explain.
2. Differentiate necrosis and apoptosis.
3. Write on gene mapping techniques.
4. Write a note on humanized antibodies.
5. What is polymorphism? Explain it with suitable example.
6. Write the principle, procedure and application of flow cytometry.
7. How primary cells are cultured? Explain and state its limitations.
