

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

[LO 984]

MAY 2019

Sub. Code: 2984

**M.PHARM. DEGREE EXAMINATION  
(PCI New regulations 2016)  
SEMESTER-I  
BRANCH VI –PHARMACOLOGY – MPL  
PAPER IV – CELLULAR AND MOLECULAR PHARMACOLOGY**

*Q.P. Code : 262984*

**Time : Three hours**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Discuss in detail the various processes of cell death. Explain about the apoptotic pathways.
2. How do cells communicate with each other? Discuss in detail the JAK-STAT signaling pathway.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Application of any two equipments used in cell culture lab.
2. Gene transfer techniques.
3. Flow cytometry- principle and applications.
4. Humanisation of antibodies and their applications.
5. What is Proteomics and what are its applications?
6. Gene sequencing techniques.
7. Polymorphisms affecting drug metabolism.

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