

Total No. of Questions : 14]

M. PHARMACY DEGREE EXAMINATIONS, JULY - 2022
First Semester
PHARMACOLOGY
CELLULAR AND MOLECULAR PHARMACOLOGY

Time : **Three Hours**Maximum : **75 Marks****SECTION - A****Answer any FIVE Questions.****5x5 = 25 M**

1. Write short notes on necrosis.
2. Explain role of Diacylglycerol as secondary messenger.
3. Mention principle of ELISA.
4. Discuss applications of proteomics.
5. Enumerate protocol for isolation of cells.
6. Describe structure and functions of chromosomes.
7. Explain the types of vectors used in cloning experiments.

SECTION - B**Answer any FIVE Questions.****5x10 = 50 M**

8. Explain the events of cell death. Mention about regulators of cell death.
9. Describe the structure and signalling pathways of nuclear receptors.
10. Explain the principle, types and applications of micro array techniques.
11. Define Immunotherapeutics. Discuss the types and side effects to Immunotherapeutics.
12. What are cell viability assays ? Describe in detail types, principle and applications of cell viability assays.
13. Write short notes on
 - a) Regulation of biosimilars.
 - b) Metabolomics.
14. What is gene therapy ? Explain mode of action of gene therapy. Add a note on it's limitations.

M. PHARMACY (SUPPLE) DEGREE EXAMINATIONS, JANUARY - 2022**First Semester
PHARMACOLOGY****CELLULAR AND MOLECULAR PHARMACOLOGY**Time : **Three Hours**Maximum : **75 Marks****SECTION - A****Answer any FIVE Questions.****5x5 = 25 M**

1. Write note on gene mapping.
2. Discuss the culture techniques in subculture.
3. Write about Neurosis & Autophagy.
4. Write briefly about non viral vectors used in gene therapy.
5. Write about Nuclear receptors.
6. Discuss about applications of Flow Cytometry.
7. Write the procedure & applications of MTT assay.

SECTION - B**Answer any FIVE Questions.****5x10 = 50 M**

8. Write down different types of Immuno therapeutics & write about their importance in clinical practice.
9. Discuss about molecular structure of Ligand gated Ion channels.
10. Explain about Intracellular signaling between Neurons. Add a note on cyclic GMP.
11. Write about process of cell death & apoptotic pathways.
12. Write in detail about Recombinant DNA technology.
13. Discuss about genetic variation of GPCR's.
14. Describe the principles & applications of genomics. Add a note on ELISA.

M.PHARMACY (Regular) DEGREE EXAMINATIONS, FEB/MAR-2020**First Semester****M.PHARMACY****PHARMACOLOGY****CELLULAR AND MOLECULAR PHARMACOLOGY**

Time: Three Hours

Maximum marks:75

SECTION-A**Answer any FIVE Questions****5X5=25M**

1. Write about calcium influx assay?
2. Write a note on the applications of proteomics?
3. What are the advantages of pUC vectors over pBR vectors?
4. Explain the pharmacology of 3', 5'-cyclic adenosine monophosphate?
5. Write a note ligand gated ion channels?
6. Explain the principle and applications of DNA electrophoresis?
7. Discuss about applications of DNA recombinant technology?

SECTION-B**Answer any FIVE Questions****5X10=50M**

8. Explain the various effector pathways through which G-protein coupled receptor functions?
9. Describe the various secondary messengers involved in signal transduction pathway?
10. Explain about humoral and cellular immunotherapies?
11. Write about the regulation of gene expression?



12. Explain in detail about the various disease targets for gene therapy?
13. How will you prepare and maintain cell cultures?
14. Write a note on viral vectors in gene therapy?

M.PHARMACY (Supply) DEGREE EXAMINATIONS, AUGUST-2019

First Semester

PHARMACOLOGY

CELLULAR AND MOLECULAR PHARMACOLOGY

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions

5X5=25M

1. Enumerate the role of cAMP as secondary messenger.
2. Discuss the structure and function of nucleus.
3. What are restriction enzymes. Explain their role in gene expression.
4. Define genetic polymorphism. Write about the types of genetic polymorphism.
5. Discuss different types and use of cell culture media.
6. Compare and contrast between RT-PCR and Real time PCR.
7. Explain the principle and procedure of MTT assay.

SECTION-B

Answer any FIVE Questions

5X10=50M

8. What is SiRNA Technology? Describe in detail the process of gene silencing by SiRNA's.
9. Discuss in detail intracellular signalling by MAPK-Pathway.
10. Explain the types, tools and methods of gene sequencing.
11. Define proteomics. Enumerate different approaches and applications of proteomics
12. Describe in detail principle, procedure and applications of flow cytometry.
13. Discuss the need, purpose and methods used for Glucose uptake assays.
14. What is regulation of gene expression? Write in detail different methods of regulation of gene expression.

I/II M.PHARMACY (Regular) DEGREE EXAMINATIONS, FEB-2019
First Semester
M.PHARMACY (PHARMACOLOGY)
CELLULAR AND MOLECULAR PHARMACOLOGY

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions

5X5=25M

1. Enumerate the role of cGmp as secondary messenger.
2. Discuss the structure and function of mitochondria.
3. Write briefly about gene transfer techniques.
4. Emphasize the importance of polymorphism on drug transporters.
5. Describe in detail procedure of subculturing.
6. Write short notes on application of electrophoresis on DNA isolation and separation.
7. Explain the principle and procedure of SRB assay.

SECTION-B

Answer any FIVE Questions

5X10=50M

8. Describe in detail different stages of cell cycle. Add a note on role of cyclins on regulation of cell cycle.
9. Describe the structure of ligand gated ion channels. Discuss the intra cellular signalling pathways mediated by ion channels.
10. Discuss the principle and applications of microarray techniques.
11. Define metabolomics. Enumerate different approaches and applications of metabolomics.
12. Write about concept of biosimilars. Emphasize the importance of regulations and pharmacovigilance in development of biosimilars.

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13. Discuss the need, Purpose and methods used for calcium influx assays.
14. What are transcription factors? Explain their role in regulation of gene expression.

