

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

[MD 1224]

**DECEMBER 2024
(OCTOBER 2024 EXAM SESSION)**

Sub. Code: 4094

M.D. DEGREE EXAMINATION

PHARMACOLOGY

**PAPER IV – RECENT ADVANCES IN PHARMACOLOGY,
RESEARCH WITH ETHICS AND BIOSTATISTICS & MEDICAL EDUCATION**

Q.P. Code: 204094

Time : Three Hours

Maximum : 100 Marks

I. Essay: **(2 x 15 = 30)**

1. A 27-year-old male presents with tremors and palpitation and signs of depression following loss of partner 2 weeks ago. In this setting
 - a) What is your provisional diagnosis?
 - b) Describe the mechanism of action of antidepressants with suitable diagram and add a note on adverse effects.
 - c) Brief on pharmacotherapy of depression.
2. Pharmacotherapy of Inflammatory Bowel Disease.

II. Short notes: **(10 x 5 = 50)**

1. Medical patents.
2. Phase IIa and Phase IIb trials.
3. Targeted conjugated drugs in anticancer chemotherapy.
4. Aligning and integration in CBME curriculum.
5. Steps for conducting N - of -1 Trial Design and limitation.
6. Principles in accepting a scientific literature for Licensure.
7. Recent advances in Insulin preparation.
8. Role of clinical pharmacologist in health care system.
9. STROBE, SPIRIT, MOOSE – explain.
10. Roles of laypersons and sociologist in IEC.

III. Reasoning Out: **(4 x 5 = 20)**

1. Mirabegron.
2. Compare the hemodynamic effect of Adrenaline, Noradrenaline, Isoprenaline with suitable diagram.
3. Schedule H1 Antibiotics and purpose.
4. Compare Vitamin K preparations and uses.

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[MD 0525]

MAY 2025

Sub. Code: 4094

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Time : Three Hours

Maximum : 100 Marks

I. Essay: (2 x 15 = 30)

1. a) Classify the drugs used in arrhythmias and write the mechanism of genesis of arrhythmia.
b) Write briefly on Class I Antiarrhythmic drugs.
c) Treatment of PSVT.
2. Describe in detail about Antiretroviral drugs and Therapeutic regimens.

II. Short notes: (10 x 5 = 50)

1. Biologics in Rheumatoid arthritis.
2. Vasopressin receptor modulators.
3. Recent advances in pharmacotherapy of Migraine.
4. Bio similar drugs.
5. Functions of DCGI.
6. CAR T cell therapy.
7. Pharmacovigilance – causality assessment.
8. ICH – GCP guidelines.
9. Prebiotics and Probiotics.
10. p-value in statistics.

III. Reasoning Out: (4 x 5 = 20)

1. Role of cell cultures in research.
2. Beta-lactamase inhibitors – clinical implications.
3. Lesson plan and its significance in CBME.
4. Pyridoxine in TB management.

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Time : Three Hours

Maximum : 100 Marks

I. Essay:

(2 x 15 = 30)

1. Discuss in detail about the therapeutic applications of Chrono pharmacology.
2. What is dyslipidemia? What are the recent advances in the management of dyslipidemia?

II. Short notes:

(10 x 5 = 50)

1. Risk categories in clinical research.
2. Clinical trial registries and their importance.
3. Self-directed learning in CBME.
4. Tirzepatide.
5. Platform trials.
6. What are the common Indexing databases and why are they important?
7. Discuss the pharmacology of VEGF inhibitors.
8. Student T test and its applications.
9. Roles and responsibilities of a sponsor in a clinical trial.
10. Assent vs Consent.

III. Reasoning Out:

(4 x 5 = 20)

1. Confounders vs Effect modifiers.
2. Antibiotics induced nephrotoxicity.
3. CAR T cell therapy.
4. Post trial access.
