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

[MD 1224] **DECEMBER 2024** **Sub. Code: 4094**

(OCTOBER 2024 EXAM SESSION)

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 n 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.

****

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

[MD 0525] **MAY 2025** **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) 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.

****

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

[MD 1025] **OCTOBER 2025** **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. 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.

****

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

[MD 0526] **MAY 2026** **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. Define Evidence based medicine. Describe the need and principles of EBM. Discuss in detail about the levels of Evidence.
2. Discuss in detail about the recent advances in the management of arterial and venous thrombosis.

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

1. Vulnerable population in Research.
2. Compare and contrast formative and summative assessment.
3. Research misconduct.
4. Suzetrigine.
5. Write briefly on NS5A inhibitors.
6. Small group teaching learning methods.
7. Uses of cannabinoids.
8. Sample size and its significance.
9. CLEAR outcomes and serenity trials.
10. Recent advances in ADHD treatment.

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

1. AI driven drug discovery.
2. Superinfection and its challenges.
3. Drug induced liver injury.
4. Low dose colchicine in ischemic heart disease.

****