

MANIPAL UNIVERSITY**MD (PHARMACOLOGY) DEGREE EXAMINATION – APRIL 2016****SUBJECT: PAPER I: GENERAL PHARMACOLOGICAL PRINCIPLES AND APPLIED SCIENCES**

Monday, April 18, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay Questions:**

1. Discuss the various pharmacokinetic principles and its clinical significance. (15 marks)

2. Discuss chronopharmacology with examples. (15 marks)

3. **Write briefly on:**

3A. Transporters as target of drug action

3B. Genetics as a factor modifying drug action

3C. Polypharmacy in geriatric population

3D. Drugs obtained from recombinant technology

3E. Irrational drug combinations

3F. Treatment of drug dependence

3G. Receptor regulation

3H. Food –drug interactions

3I. Orphan drugs

3J. Partial agonists and their clinical importance

(7 marks × 10 = 70 marks)



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MANIPAL UNIVERSITY

MD (PHARMACOLOGY) DEGREE EXAMINATION – APRIL 2016

SUBJECT: PAPER II: SYSTEMIC PHARMACOLOGY, CHEMOTHERAPY AND THERAPEUTICS

Tuesday, April 19, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay Questions:**

1. Discuss various agents modulating renin angiotensin system. (15 marks)
2. Discuss the various regimens for the management of P. falciparum malaria. (15 marks)

3. **Write briefly on:**

- 3A. COX-2 inhibitors
- 3B. Hematopoietic growth factors
- 3C. Reverse transcriptase inhibitors
- 3D. Bacterial drug resistance
- 3E. Vinca alkaloids
- 3F. Current status of inotropic agents
- 3G. Telithromycin
- 3H. Non epileptic uses of antiepileptic drugs
- 3I. Atypical antipsychotics
- 3J. Prokinetic agents

(7 marks × 10 = 70 marks)



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MANIPAL UNIVERSITY

MD (PHARMACOLOGY) DEGREE EXAMINATION – APRIL 2016

SUBJECT: PAPER III: EXPERIMENTAL PHARMACOLOGY, BIOASSAY AND STATISTICS

Wednesday, April 20, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay questions:**

1. Define Bioassay. Discuss various experimental methods of bioassay in animals. (15 marks)

2. Discuss the screening methods of antidepressant drugs. (15 marks)

3. **Write briefly on:**

3A. Institutional Animal Ethics Committee

3B. Rabbit as an experimental animal

3C. Cotton pellet induced granuloma

3D. Different methods of drug administration in rats

3E. Straub tail reaction

3F. Maximal electroshock model (MES)

3G. Carcinogenicity testing in animals

3H. Screening of antianginal drugs

3I. Hot plate method

3J. p-value

(7 marks × 10 = 70 marks)



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MD (PHARMACOLOGY) DEGREE EXAMINATION – APRIL 2016

SUBJECT: PAPER IV: CLINICAL PHARMACOLOGY AND RECENT ADVANCES

Thursday, April 21, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay Questions:**

1. Write a protocol for phase III clinical trial for a drug with antihypertensive activity. (15 marks)

2. Explain the therapeutic uses of estrogens. (15 marks)

3. **Write briefly on:**

3A. Schedule Y

3B. DPP4 inhibitors

3C. Finasteride

3D. Granisetron

3E. Advantages of SSRIs

3F. Omalizumab

3G. GnRH analogues

3H. Pramlintide

3I. Ames test

3J. Meta-analysis

(7 marks × 10 = 70 marks)

