

2/1/20

Paper Code : MPH101T A (SVSU:2019-20/R)

Enrollment No.

MPH-101T/ MPL-101T

(1st YEAR , 1st SEM.) EXAMINATION

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

[Max. Marks : 75]

TIME 3.00 Hrs

Attempt all questions

Q.1. Answer any five of the following:

(3×5 = 15)

- i. Discuss electronic transitions
- ii. Discuss bending vibration
- iii. Write about Lamberts law
- iv. Detector in infrared spectroscopy
- v. Discuss chemical shift
- vi. Discuss stretching vibration
- vii. Define Beers law

Q.2. Answer any five of the following:

(3×5 = 15)

- i. Write a note on Thin Layer chromatography.
- ii. Discuss H.P.L.C
- iii. Applications of mass spectroscopy.
- iv. Discuss chromatography
- v. Discuss Flourimetry
- vi. Write a note on paper chromatography
- vii. Discuss different types of spectroscopy

Q. 3. Answer any two of the following:

(7.5×2 = 15)

- i. Discuss E.L.I.S.A
- ii. Discuss vibration in I.R spectroscopy
- iii. Discuss applications of U.V visible spectroscopy.

Q. 4. Answer any two of the following:

(7.5×2 = 15)

- i. Discuss instrumentation of mass spectroscopy
- ii. Discuss electrophoresis in detail
- iii. Discuss sample handling in I.R spectroscopy

Q. 5. Answer any one of the following:

(15×1 = 15)

- i. Give a note on gas chromatography in detail.
- ii. Discuss principle and instrumentation of U.V visible spectroscopy

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4/1/20

Paper Code : MPL102T A (SVSU:2019-20/R)

Enrollment No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

MASTER OF PHARMACY- (MPL)
(1st YEAR , 1st SEM.) EXAMINATION
ADVANCED PHARMACOLOGY I

[Max. Marks : 75]

Time: 3.0 Hr

Q.1. Attempt any five of the following-

(3x5=15)

- a. Define absolute bioavailability and relative bioavailability.
- b. Explain plasma protein and its importance.
- c. What is GABA?
- d. Differentiate Acetylcholinesterase and Butyrylcholinesterase.
- e. Classify calcium channel blockers.
- f. What are hypolipidemics.

Q.2. Attempt any five of the following-

(3x5= 15)

- a. Discuss different routes of drug administration.
- b. Give a brief note on Receptors and functional families of receptors.
- c. Discuss steps involved in Neurohumoral transmission.
- d. What are the importance of Antidiuretics?
- e. Mention the importance of nitrates in angina.
- f. Classify Diuretics and explain MOA of Furosemide.

Q.3. Attempt any two of the following-

(7.5x2= 15)

- a. Classify Antihypertensive drugs and explain MOA of ACE inhibitors.
- b. Discuss disease characterized by Dopamine deficiency and classify its drug treatment.
- c. Write a note on biosynthesis of Prostaglandins and Leukotrienes.

Q.4. Attempt any two of the following-

(7.5x2= 15)

- a. Discuss Synthesis and storage of Serotonin and explain its importance in Migraine therapy.
- b. Explain G- Protein couples receptor in detail with example.
- c. What are the stages of general anesthesia, discuss complications with GA.

Q.5. Attempt any one of the following-

(15x1=15)

- a. Elaborate pharmacology of neurodegenerative diseases with drug treatment of Alzheimer's disease.
- b. Explain Kinetics of drug elimination (zero order and first order)

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7/1/2020

Paper Code : MPL103T A (SVSU:2019-20/R)

Enrollment No.

MASTER OF PHARMACY- (MPL)

(1st YEAR, 1st SEM.) EXAMINATION

PHARMACOLOGICAL AND TOXICOLOGICAL SCREENING METHODS I

[Max. Marks : 75]

Time: 3.0 Hrs

Q1. Attempt any five questions-

(3X5=15)

- Give a short note on importance of Nude mouse.
- Discuss in short about the maintenance and breeding of laboratory animals.
- Enlist the anesthetic agent used for laboratory animals.
- Define bioassay and give their types.
- Discuss any two *in-vivo* screening methods for laxatives.
- Discuss in brief about any two preclinical screening models used for anti-diabetics.
- Write any three *in-vivo* screening methods for diuretics.

Q2. Attempt any five questions-

(3X5=15)

- Write a short note on Spontaneously Hypertensive Rat in experimental pharmacology.
- Enumerate euthanasia of commonly used experimental animals.
- Write a short note on laboratory animals used in experimental pharmacology.
- Enlist three preclinical pharmacological screening methods of Analgesics?
- What are transgenic animals? explain various techniques used to produce transgenic animals.
- Enumerate the screening method of drugs used in Alzheimer's disease.
- Write down in short about Hepatoprotective screening methods.

Q3. Attempt any two questions-

(7.5X2=15)

- Discuss in detail about preclinical screening of the Anti-cancer agents using in vivo models.
- Define bioassay and discuss in detailed about various bioassay methods.
- Write any three *in-vivo* screening methods for anti-epileptic agents.

Q4. Attempt any two questions-

(7.5X2=15)

- Explain in detail the different *in-vivo* models employed in the screening of anti-ulcer drug.

- b) Describe the various methods employed in the screening of Anti-Parkinsonism drug.
- c) Give various pharmacological screening methods for anti-asthmatic drugs.

(15X1=15)

Q5. Attempt any one question

- a) Discuss in detailed about preclinical screening models used for evaluation of antihypertensives.
- b) What are the guidelines of CPCSEA to maintain the animal house (Committee for the Purpose of Control and Supervision on Experimental Animals).

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M. Pham. ②

9/11/2020

Paper Code : MPL104T A (SVSU:2019-20/-)

Enrollment No.

MASTER OF PHARMACY- (MPL)
(1st YEAR , 1st SEM.) EXAMINATION
CELLULAR AND MOLECULAR PHARMACOLOGY

[Max. Marks : 75]

Time: 3.0 Hr

Q.1. Attempt any five of the following-

(3x5=15)

- What is gene sequencing?
- What is Nutrigenomics?
- Describe cell cycle.
- What is gene expression?
- Write in brief about vectors used in gene therapy.
- Give the applications of siRNA and miRNA.

Q.2. Attempt any five of the following-

(3x5= 15)

- Give the basic principle of recombinant DNA technology.
- Write in brief about types of gene therapy.
- Explain cell cycle check points.
- Write in brief about gene mapping.
- Define intercellular and intracellular signaling pathways.
- Write in brief about types of gene therapy.

Q.3. Attempt any two of the following-

(7.5x2= 15)

- Write in detail about regulation of gene expression.
- Give the principle and applications of DNA electrophoresis
- Write in detail about importance of siRNA and miRNA.

Q.4. Attempt any two of the following-

(7.5x2= 15)

- Explain in detail about intrinsic and extrinsic pathway of apoptosis.
- Write a detailed note on culture techniques involved in subculture.
- Write a detailed note on mitogen activated protein kinase (MAPK) pathway.

Q.5. Attempt any one of the following-

(15x1=15)

- Give a detailed account on applications of proteomic science.
- Classify receptors. Write in detail about G-protein coupled receptors.

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