

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

[LL 983]

NOVEMBER 2017

Sub. Code: 2983

**M.PHARM. DEGREE EXAMINATION**  
**(PCI New regulations 2016)**  
**SEMESTER-I**  
**PHARMACOLOGY – MPL**  
**PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL**  
**SCREENING METHODS - I**

*Q.P. Code : 262983*

**Time : Three hours**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. a) What are the guidelines of CPCSEA to maintain the animal house (Committee for the Purpose of Control and Supervision on Experimental Animals).  
b) Enumerate anesthesia and euthanasia of commonly used experimental animals.
2. Discuss the various methods employed in the screening of Anti-Hypertensive agents.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Application of different species and Strains of animals.
2. Explain the various principle and methods of bio assay.
3. Enumerate the screening method of Diuretics drugs.
4. Write any two *in-vivo* screening methods for anti-epileptic agents.
5. Homogenous immunoassay system.
6. Advantages of alternative experimental models.
7. Write any two *in-vivo* screening methods for anti- fertility agents.

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

[LM 983]

MAY 2018

Sub. Code: 2983

**M.PHARM. DEGREE EXAMINATION**  
**(PCI New regulations 2016)**  
**SEMESTER-I**  
**PHARMACOLOGY – MPL**  
**PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL**  
**SCREENING METHODS - I**

*Q.P. Code : 262983*

**Time : Three hours**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain in detail the different *Invivo* models employed in the screening of sympathomimetic drugs.
2. Discuss about the screening methods available for Anti-Inflammatory drugs. Explain in detail about the Freund's complete adjuvant induced arthritis.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Write any two *Invivo* screening methods for Anti-hypertensive drugs.
2. Write any two *Invivo* screening methods for Anti-emetic drugs.
3. Morris water Maze test.
4. Write two *Invitro* screening method for Anti-cancer drugs.
5. What are the methods of production of immunoassay agents?
6. Advantages of Nude mice in experimental pharmacology.
7. Enumerate the screening method of drugs used in Alzheimer's disease.

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

[LN 983]

NOVEMBER 2018

Sub. Code: 2983

**M.PHARM. DEGREE EXAMINATION**  
**(PCI New regulations 2016)**  
**SEMESTER-I**  
**PHARMACOLOGY – MPL**  
**PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL**  
**SCREENING METHODS - I**

*Q.P. Code : 262983*

**Time : Three hours**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. List out the methods available for Induction of Diabetes experimentally. How is streptozotocin used to induce Type-I and Type-II diabetes in the screening of Anti-Diabetic agents?
2. List out the screening models for Parkinsonism and explain MPTP model in detail.

**II. Write notes on:**

**(7 x 5 = 35)**

1. General principles of Immunoassay agents.
2. Write any two *in-vivo* screening methods for anti-asthmatic drugs.
3. Write any two *in-vivo* screening methods for anti-anxiety drugs.
4. Role of Transgenic animal model in practical research.
5. Cotton wool granuloma pouch method.
6. *In-vitro* method for the screening of Para-sympathomimetic drugs.
7. Shay Rat model.

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

[LO 983]

MAY 2019

Sub. Code: 2983

**M.PHARM. DEGREE EXAMINATION**  
**(PCI New regulations 2016)**  
**SEMESTER-I**  
**BRANCH VI – PHARMACOLOGY – MPL**  
**PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL**  
**SCREENING METHODS - I**

*Q.P. Code : 262983*

**Time : Three hours**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain in detail the different *invivo* models employed in the screening of Anti-Arrhythmic agents.
2. a) What are the methods of evaluation of immune assay agents?  
b) Role of transgenic animal model in practical research.

**II. Write notes on:**

**(7 x 5 = 35)**

1. *In-vitro* method for the screening of sympathomimetic drugs.
2. Write any two *invivo* screening methods for anti-hypertensive drugs.
3. Enumerate the screening method of drugs used in Alzheimer's disease.
4. Animal models employed in the screening of Analgesic agents.
5. Animal models employed in the screening of diuretic agents.
6. Important screening models for immuno suppressant drugs.
7. Enumerate anti psychotic drugs screening methods.

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

[LP 983]

NOVEMBER 2019

Sub. Code: 2983

**M.PHARM. DEGREE EXAMINATION**  
**(PCI New regulations 2016)**  
**SEMESTER-I**  
**BRANCH VI – PHARMACOLOGY – MPL**  
**PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL**  
**SCREENING METHODS - I**

*Q.P. Code : 262983*

**Time : Three hours**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Discuss the various methods employed in the screening of Anti-Epileptic agents.
2. Discuss the various *invivo* and *invitro* methods employed in the screening of Anti-inflammatory agents.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Write important screening methods for anxiolytic drugs.
2. Maintenance and breeding of laboratory animals.
3. Write two *invitro* screening method for anticancer drugs.
4. Write two *Invivo* screening method for anti-ulcer drugs.
5. Various screening methods for Hepatoprotective agents.
6. Various screening methods for Anti-pyretic agents.
7. Explain the principle and types of bio-assay.

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

[LQ 0121]

JANUARY 2021

Sub. Code: 2983

(APRIL 2020 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION

SEMESTER-I (PCI New regulations 2016)

PHARMACOLOGY – MPL

PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL

SCREENING METHODS - I

*Q.P. Code : 262983*

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

**I. Elaborate on:**

(2 x 20 = 40)

1. List out the methods available for Induction of Diabetes experimentally. How is streptozotocin used to induce Type-I and Type-II diabetes in the screening of Anti-Diabetic agents.
2. List out the screening models for Parkinsonism and explain MPTP model in detail.

**II. Write notes on:**

(7 x 5 = 35)

1. General principles of Immunoassay agents.
2. Cotton wool granuloma pouch method.
3. Write any two *invivo* screening methods for anti-emetic drugs.
4. Write any two *invivo* screening methods for anti-depressant drugs.
5. Write important screening methods for anti-diarrheal drugs.
6. Write important screening methods for anxiolytic drugs.
7. Maintenance and breeding of laboratory animals.

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

**[MPHARM 0921]**

**SEPTEMBER 2021  
(OCTOBER 2020 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER-I (PCI New regulations 2016)  
PHARMACOLOGY - MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS - I  
*Q.P. Code : 262983***

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. What are the guidelines of CPCSEA to be followed in maintenance, breeding and conduct of experimentation on experimental animals?
2. Discuss the various methods employed in the screening of centrally acting and peripherally acting analgesics.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Transgenic animals in research.
2. Write the principles and methods of bioassay.
3. Write briefly about *in-vivo* screening models of anti-dyslipidemic agents.
4. Discuss about chemically induced models of Parkinsonism.
5. Explain Lipschitz test.
6. Explain cotton wool granuloma pouch method.
7. Limitations of animal experimentation and alternatives to animals in pre-clinical research.

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

**[MPHARM 0122]**

**JANUARY 2022  
(APRIL 2021 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER-I (PCI New regulations 2016)  
PHARMACOLOGY - MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS - I  
*Q.P. Code : 262983***

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Write the general principles and methods of immunoassay. Discuss in detail the heterogeneous and homogenous immunoassay systems.
2. Discuss in detail the various methods employed in screening of Alzheimer's drugs and write a note on stereotaxic apparatus.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Write about the *in-vivo* screening models of anti-fertility agents.
2. Freund's complete adjuvant induced arthritis.
3. Morris water maze test.
4. Shay rat model in anti-ulcer screening.
5. Explain in detail two *in-vivo* screening models of hepatoprotective agents with the evaluation parameters.
6. Euthanasia of experimental animals as per CPCSEA guidelines.
7. Explain the *in-vitro* models of anti-cancer drug screening.

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

**[MPHARM 0422]**

**APRIL 2022  
(OCTOBER 2021 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER-I (PCI New regulations 2016)  
PHARMACOLOGY - MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS - I  
*Q.P. Code : 262983***

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain in detail about *in-vitro* and *in-vivo* models of anti-cancer drug screening.
2. Discuss the methods employed in anesthesia and euthanasia in experimental animals as per CPCSEA guideline. Add a note on blood collection techniques in experimental animals.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Explain the procedure to perform Oral Glucose Tolerance Test (OGTT) in normal and hyperglycemic rats.
2. Screening models of immune-suppressant drugs.
3. Write about the production and applications of transgenic animals.
4. Explain any two *in-vivo* screening models of anti-psychotics.
5. Explain the chronic models of inflammation.
6. Write a note on Elevated plus maze and Y-maze in behavioral pharmacology.
7. Explain in detail two *in-vivo* screening models of hepatoprotective agents with the evaluation parameters.

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

**[M.PHARM 0922]**

**SEPTEMBER 2022  
(APRIL 2022 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New regulations 2016)  
PHARMACOLOGY – MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS – I**

*Q.P. Code : 262983*

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain the various methods employed in the screening of Antihypertensive drugs.
2. Discuss the various methods employed in the screening of Antiepileptic drugs.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Explain two invitro screening methods of Anticancer drugs.
2. Write about the principles and types Bioassays.
3. General principles of Immunoassay agents.
4. Maintenance and breeding of laboratory animals.
5. Write any two in-vivo screening methods of Antiasthmatic drugs.
6. Important screening models for Immunosuppressant drugs.
7. Explain the advantages of Alternative experimental models.

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

**[M.PHARM 0423]**

**APRIL 2023  
(OCTOBER 2022 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New regulations 2016)  
PHARMACOLOGY – MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS – I**

*Q.P. Code: 262983*

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. (a) What are the methods of evaluation of Immunoassay agents?  
(b) Role of transgenic animal model in practical research.
2. Describe the various invitro and invivo methods employed in the screening of Anti Ulcer Drugs.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Explain the invitro method for the screening of sympathomimetic drugs.
2. Write important screening methods for Anxiolytic drugs.
3. Explain the various principles and methods of Biossays.
4. Enumerate the screening methods of Diuretic drugs.
5. Write about homogenous immunoassays.
6. Mention the advantages of alternative experimental models.
7. Explain any two invivo screening methods for anti-fertility agents.

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

**[M.PHARM 0823]**

**AUGUST 2023  
(APRIL 2023 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New Regulations 2016)  
PHARMACOLOGY – MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS – I**

*Q.P. Code: 262983*

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Discuss the various invivo and invitro methods employed in the screening of Anti-inflammatory agents.
2. Discuss the various methods employed in the screening of Anti-Epileptic agents.

**II. Write notes on:**

**(7 x 5 = 35)**

1. In-vitro method for the screening of Parasympathomimetic drugs.
2. Write any two invivo screening methods for anti-hypertensive drugs.
3. Immuno assay for digoxin.
4. Enumerate the screening method of drugs used in Alzheimer's disease.
5. Animal Models employed in the screening of Analgesic agents.
6. Write two In-vitro screening method for anticancer drugs.
7. Various breeding methods of laboratory animals.

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

**[M.PHARM 1223]**

**DECEMBER 2023  
(OCTOBER 2023 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New Regulations 2016)  
PHARMACOLOGY – MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS – I**

*Q.P. Code: 262983*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. (a) Explain the Anaesthesia and Euthanasia techniques used in experimental animals.  
(b) What are the guidelines of CPCSEA to maintain the animal house?
2. Explain in detail the different in vivo models employed in the screening of antiarrhythmic drugs.

**II. Write notes on:**

**(7 x 5 = 35)**

1. What are the methods of evaluation of Immunoassay agents?
2. Enumerate Antidiabetic drug screening methods.
3. Explain the invitro methods for the screening of sympathomimetic drugs.
4. Explain the principles and types of Bioassays.
5. Write two invitro screening methods for anticancer drugs.
6. Write about important screening methods for Anxiolytic drugs.
7. Explain cotton wool granuloma pouch method.

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

**[M.PHARM 0524]**

**MAY 2024  
(APRIL 2024 EXAM SESSION)**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New Regulations 2016)  
PHARMACOLOGY – MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS – I**

*Q.P. Code: 262983*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. What are transgenic animals? Discuss in detail different transgenic animal models used in screening of Neurodegenerative disorders.
2. Explain various animal models employed for the screening of antihypertensive drugs.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Explain the techniques involved in breeding of laboratory animals.
2. Write a note on any two models used for screening antipyretic drugs.
3. Write a note on Randall Selitto method.
4. What is heterogenous immunoassay? Give its principle and application in screening.
5. Discuss any two models for the screening of laxatives.
6. What is Bioassay? Give its limitations and application in assay of drugs.
7. How sympathomimetic drgus are screened in dog experimental model?

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

**[M.PHARM 0425]**

**APRIL 2025**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New Regulations 2016)  
PHARMACOLOGY – MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS – I**

*Q.P. Code: 262983*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. List out the methods available for Induction of Diabetes experimentally. How is streptozotocin used to induce Type-I and Type-II diabetes in the screening of Anti-Diabetic agents.
2. Explain in detail the different invivo models employed in the screening of Anti-Arrhythmic agents.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Write any two in-vivo screening methods for anti-asthmatic drugs.
2. Write any two in-vivo screening methods for anti-emetic drugs.
3. Write any two in-vivo screening methods for anti-depressant drugs.
4. Animal Models employed in the screening of diuretic agents.
5. Important screening models for immune suppressant drugs.
6. Maintenance and breeding of laboratory animals.
7. General principles of Immunoassay agents.

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

**[M.PHARM 1025]**

**OCTOBER 2025**

**Sub. Code: 2983**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER - I (PCI New Regulations 2016)  
PHARMACOLOGY – MPL  
PAPER III – PHARMACOLOGICAL AND TOXICOLOGICAL  
SCREENING METHODS – I**

*Q.P. Code: 262983*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. a) Enumerate screening methods for anti-anxiety agents.  
b) Discuss various methods employed in euthanasia of laboratory animals.
2. Describe in detail the different animal models used for screening anti-inflammatory agents.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Describe various bioassay techniques.
2. Explain any two models for screening analgesic drugs.
3. Explain Lipschitz test.
4. Write any two in-vivo screening methods for anti-psychotic agents.
5. Briefly describe Langendroff's heart experiment.
6. Explain general principles of immunoassay technique.
7. Describe screening models for anti-diabetic agents.

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