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

[LL 993] NOVEMBER 2017 **Sub. Code: 2993**

M.PHARM. DEGREE EXAMINATION
(PCI New regulations 2016)
SEMESTER-I
PHARMACOGNOSY - MPG
PAPER III – PHYTOCHEMISTRY

Q.P. Code : 262993

Time : Three hours **Maximum : 75 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Discuss in detail on latest methods of separation of phyto-constituents.

2. Biosynthesis and isolation of :
   a) Vinca alkaloids b) Quercetin

II. Write notes on: **(7 x 5 = 35)**

1. Microwave assisted extraction technique.

2. Characterisation of herbal extracts by LCMS.

3. Spectral methods of identification of Nicotine.

4. Clinical trials protocol design for lead molecules.

5. Application of IR and NMR spectroscopy in the structural elucidation of Carvone.

6. Lead structure selection process in herbal drug discovery.

7. HPTLC and its application.

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

[LM 993] MAY 2018 **Sub. Code: 2993**

M.PHARM. DEGREE EXAMINATION
(PCI New regulations 2016)
SEMESTER-I
PHARMACOGNOSY - MPG
PAPER III – PHYTOCHEMISTRY

Q.P. Code : 262993

Time : Three hours **Maximum : 75 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Discuss in detail on biosynthesis, isolation, characterisation and purification of Digitoxin.

2. Explain in detail about the structural elucidation of the followings by spectral studies:
   a) Carvone b) Citral

II. Write notes on: **(7 x 5 = 35)**

1. Biosynthesis and isolation of Quinine.

2. Supercritical fluid extraction technique and its applications.

3. Preparative HPLC and its application in the separation of Phyto-constituents.

4. Application of GCMS in the characterisation of Herbal extracts.

5. Different phases of clinical trials.

6. Counter current extraction technique.

7. High performance thin layer chromatography.

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

[LO 993] MAY 2019 **Sub. Code: 2993**

M.PHARM. DEGREE EXAMINATION
(PCI New regulations 2016)
SEMESTER-I
BRANCH VII – PHARMACOGNOSY - MPG
PAPER III – PHYTOCHEMISTRY

Q.P. Code : 262993

Time : Three hours **Maximum : 75 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Discuss in detail on biosynthesis, isolation, characterisation and purification of Ephedrine.

2. Give a brief account on different methods of extraction of phytoconstituents.

II. Write notes on: **(7 x 5 = 35)**

1. Application of HPTLC in the characterization of Herbal extracts.

2. Flash chromatography and its application.

3. Structural elucidation of Carvone by spectral studies.

4. Lead structure selection process in herbal drug discovery.

5. Biosynthesis and isolation of Sennosides.

6. Spectral methods of identification of Menthol.

7. Selection and optimization of lead compound from *Artemisia.*

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

[LQ 0121] JANUARY 2021 Sub. Code: 2993

(APRIL 2020 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION

SEMESTER-I (PCI New regulations 2016)

PHARMACOGNOSY – MPG

PAPER III – PHYTOCHEMISTRY

Q.P. Code : 262993

Time : Three hours Answer ALL Questions Maximum : 75 Marks

I. Elaborate on: (2 x 20 = 40)

1. Discuss the isolation and characterisation of :
   a) Quinine b) Quercetin

2. Explain the recent advances in the separation of phytoconstituents.

II. Write notes on: (7 x 5 = 35)

1. Application of tracer techniques in biosynthetic pathways.
2. Selection of lead structure in herbal drug industry.
3. Application of GCMS in the characterization of phytoconstituents.
4. Spectral methods of identification of Nicotine.
5. Biosynthesis and isolation of Digitoxin.
6. Different phases of clinical trails.
7. Structural elucidation of Citral.

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

[MPHARM 0422] APRIL 2022 Sub. Code: 2993
(OCTOBER 2021 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION
SEMESTER-I (PCI New regulations 2016)
PHARMACOGNOSY - MPG
PAPER III – PHYTOCHEMISTRY
Q.P. Code : 262993

Time : Three hours **Answer ALL Questions** **Maximum : 75 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Discuss in detail about biosynthesis, extraction and characterization of digitoxin.
2. Write a detail note on history of herbs as sources of drug discovery and discuss about the lead structure selection process.

II. Write notes on: **(7 x 5 = 35)**

1. Isolation of sennosides.
2. Flash column chromatography.
3. Applications of LCMS in the characterization of herbal extracts.
4. Biosynthesis of ephedrine.
5. Applications of radio tracing techniques.
6. Supercritical fluid extraction.
7. Structure elucidation of nicotine.

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

[M.PHARM 0922] **SEPTEMBER 2022** **Sub. Code: 2993**
(APRIL 2022 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION
SEMESTER - I (PCI New regulations 2016)
PHARMACOGNOSY - MPG
PAPER III – PHYTOCHEMISTRY

Q.P. Code : 262993

Time : Three hours **Answer ALL Questions** **Maximum : 75 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Describe the recent methods of extraction techniques with special emphasis on microwave assisted extraction technique.

2. Write a note on biosynthesis, isolation and characterization of
   a. Taxol
   b. Sennosides

II. Write notes on: **(7 x 5 = 35)**

1. Selection and optimization of lead compound from Andrographis.
2. Instrumentation and applications of HPTLC.
3. Spectral analysis of Glycyrrhizin.
4. Flash column chromatography and its applications.
5. Isolation and characterization of Piperine.
6. Applications of LCMS in the characterization of herbal extracts.
7. Protocol design for the selection of lead molecule.

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

[M.PHARM 0423] APRIL 2023 Sub. Code: 2993
(OCTOBER 2022 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION
SEMESTER - I (PCI New regulations 2016)
PHARMACOGNOSY - MPG
PAPER III – PHYTOCHEMISTRY

Q.P. Code: 262993

Time : Three hours **Answer ALL Questions** **Maximum : 75 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Discuss the role of herbs as a source of drug in drug discovery process and add a note on optimization of lead compounds for further development.

2. Write the structural elucidation of:
   a) Carvone b) Menthol

II. Write notes on: **(7 x 5 = 35)**

1. Biosynthesis and isolation of Digitoxin.
2. Super Critical Fluid Extraction techniques and its applications.
3. Structural features and spectral characters of Nicotine.
4. Preparative HPLC.
5. Applications of GCMS.
6. Clinical Trials.
7. Isolation and characterization of Ephedrine.

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

[M.PHARM 0823] **AUGUST 2023** **Sub. Code: 2993**
(APRIL 2023 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION
SEMESTER - I (PCI New Regulations 2016)
PHARMACOGNOSY - MPG
PAPER III – PHYTOCHEMISTRY

Q.P. Code: 262993

Time : Three hours **Answer ALL Questions** **Maximum : 75 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Write a note on biosynthesis, isolation and characterization of:
    a. Digitoxin
    b. Vinca Alkaloids.

2. Structural elucidation of:
    a. Nicotin
    b. Luteolin.

II. Write notes on: **(7 x 5 = 35)**

1. Role of radioactive tracer techniques in the elucidation of biosynthetic pathways.
2. Different phases of Clinical trials.
3. Selection and optimization of lead compound from Artemisia.
4. Any two recent methods of separation techniques.
5. Methods of drug discovery.
6. HPTLC in the finger printing analysis of phytoconstituents.
7. Microwave Assisted Extraction method.

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