

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

[LL 944]

NOVEMBER 2017

Sub. Code: 2944

M.PHARM. DEGREE EXAMINATION
(PCI New regulations 2016)
SEMESTER-I
PHARMACEUTICAL CHEMISTRY – MPC
PAPER IV – CHEMISTRY OF NATURAL PRODUCTS

Q.P.Code: 262944

Time: Three hours

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Write briefly the classification, isolation and isoprene rule of Terpenoids.
b) Give the structural elucidation of Squalene.
2. a) Describe the stereochemistry and nomenclature of steroids.
b) Write the chemistry of male contraceptive agents.

II. Write notes on:

(7 x 5 = 35)

1. Write a note about Lovastatin and Dicoumarol.
2. Give the general methods for determining:
 - a) Hydroxyl group.
 - b) Nature of nitrogen in alkaloids.
3. Active constituents of *Gymnema sylvestre*.
4. Oligonucleotide therapy.
5. Applications of ^1H NMR and ^{13}C NMR in structural characterization.
6. Structural elucidation of Quercetin.
7. Chemistry and significance of Folic acid.

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[LM 944]

MAY 2018

Sub. Code: 2944

M.PHARM. DEGREE EXAMINATION
(PCI New regulations 2016)
SEMESTER-I
PHARMACEUTICAL CHEMISTRY – MPC
PAPER IV – CHEMISTRY OF NATURAL PRODUCTS

Q.P.Code: 262944

Time: Three Hours

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain the applications of IR, NMR and Mass spectroscopy in the structural characterization of Morphine and Camphor.
2. Describe the chemistry of β -Lactam antibiotics.

II. Write notes on:

(7 x 5 = 35)

1. Write a short note on Cardiac Glycosides.
2. Chemistry and physiological significance of Vitamin Niacin.
3. Drugs for liver dysfunction in indigenous system.
4. Structural elucidation of Menthol.
5. Etoposide and Teniposide.
6. Recombinant DNA (rDNA) technology.
7. General structural determination methods of Flavonoids.

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[LN 944]

NOVEMBER 2018

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SEMESTER-I
PHARMACEUTICAL CHEMISTRY – MPC
PAPER IV – CHEMISTRY OF NATURAL PRODUCTS

Q.P.Code: 262944

Time: Three Hours

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Define and classify alkaloids with examples.
b) Briefly outline the structure elucidation of Reserpine including its synthesis.
2. Briefly describe about recombinant DNA technology. Add a note on gene therapy.

II. Write notes on:

(7 x 5 = 35)

1. Explain the stereochemistry of steroids.
2. Write the chemistry of Vitamin A.
3. Structural elucidation of Quercetin.
4. Applications of IR in structural characterization of Natural compounds.
5. Write a short note on any two Macrolide antibiotics.
6. Write a note on the drug used in indigenous System for Antitumor therapy.
7. Isolation and purification of Flavonoids.

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[LO 944]

MAY 2019

Sub. Code: 2944

M.PHARM. DEGREE EXAMINATION
(PCI New regulations 2016)
SEMESTER-I
BRANCH II – PHARMACEUTICAL CHEMISTRY – MPC
PAPER IV – CHEMISTRY OF NATURAL PRODUCTS

Q.P.Code: 262944

Time: Three Hours

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Drugs for diabetic therapy in indigenous system.
b) Describe the structural elucidation of ephedrine and morphine.
2. a) Write briefly the classification, isolation and isoprene rule of Terpenoids.
b) Give the structural elucidation of Citral and Menthol.

II. Write notes on:

(7 x 5 = 35)

1. Discuss the structural characterization of Vit D.
2. Describe the chemistry of contraceptive agents.
3. General methods of structural determination of flavonoids.
4. Write a note about Lovastatin and Dicoumarol.
5. Recombinant DNA (rDNA) technology.
6. Applications of IR in structural characterization of natural compounds.
7. Discuss the chemistry of Carbapenems.

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[LP 944]

NOVEMBER 2019

Sub. Code: 2944

M.PHARM. DEGREE EXAMINATION

(PCI New regulations 2016)

SEMESTER-I

BRANCH II – PHARMACEUTICAL CHEMISTRY – MPC

PAPER IV – CHEMISTRY OF NATURAL PRODUCTS

Q.P.Code: 262944

Time: Three Hours

Maximum: 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Describe the degradative reactions of Thiamine, test for method of identification and assay.
b) Chemistry of Cephalosporins.
2. a) Explain Hofmann exhaustive methylation and Van Braun method of ring opening.
b) Ziesel's method of methoxy group determination.

II. Write notes on:

(7 x 5 = 35)

1. Drugs for liver dysfunction in indigenous system.
2. Principles of DNA and RNA estimation.
3. Give the structural elucidation of camphor.
4. Discuss the chemistry of Paclitaxel.
5. Write a short note on Gene therapy.
6. General methods of structural elucidation of Terpenoids.
7. Applications of ¹HNMR in structural characterization of natural compounds.

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

[LQ 0121]

JANUARY 2021

Sub. Code: 2944

(APRIL 2020 EXAM SESSION)

M.PHARMACY DEGREE EXAMINATION

SEMESTER-I (PCI New regulations 2016)

PHARMACEUTICAL CHEMISTRY – MPC

PAPER IV – CHEMISTRY OF NATURAL PRODUCTS

Q.P. Code : 262944

Time : Three hours Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Write briefly structure elucidation and stereochemistry of ephedrine and morphine.
2. a) Write the principle behind the estimation of RNA and DNA.
b) Discuss about clinical application and recent advantages in gene therapy.

II. Write notes on:

(7 x 5 = 35)

1. Write note on flavonoids.
2. Write the isoprene rule and general methods of structure elucidation of β -carotene.
3. Stereo chemistry and nomenclature of steroids.
4. Structural characterization of natural compounds of digitalis glycosides.
5. Chemistry and physiological significance of Niacin.
6. Write note on progesterone.
7. Explain the active constituents certain crude drugs used in diabetic therapy.

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

[MPHARM 0122]

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

Sub. Code: 2944

**M.PHARMACY DEGREE EXAMINATION
SEMESTER-I (PCI New regulations 2016)
PHARMACEUTICAL CHEMISTRY - MPC
PAPER IV - CHEMISTRY OF NATURAL PRODUCTS
*Q.P. Code : 262944***

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Discuss about Chemistry and physiological significance of Vitamin A.
b) Explain how morphine is acting as a lead compound for designing newer drugs for the treatment of Central nervous system disorders.
2. a) Discuss structural elucidation of quercetin.
b) Explain briefly about chemistry of cardiac glycosides.

II. Write notes on:

(7 x 5 = 35)

1. Classify terpenoids.
2. Application of r-DNA technology.
3. Active constituents of phyllanthus niruri.
4. Structural characterization of penicillin.
5. Chemistry of macrolide antibiotics.
6. Gene Therapy.
7. Stereochemistry of Ergot alkaloids.

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

[MPHARM 0422]

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

Sub. Code: 2944

**M.PHARMACY DEGREE EXAMINATION
SEMESTER-I (PCI New regulations 2016)
PHARMACEUTICAL CHEMISTRY - MPC
PAPER IV - CHEMISTRY OF NATURAL PRODUCTS
*Q.P. Code : 262944***

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Discuss Chemistry and physiological significance of Vitamin C.
b) Explain how Lovastatin is acting as a lead compound for designing newer drugs as Cardiovascular agents.
2. a) Write briefly about structural elucidation of flavonoids.
b) Discuss about chemistry of sterols.

II. Write notes on:

(7 x 5 = 35)

1. Structural elucidation of citral.
2. Hybridoma technology.
3. Active constituents of Curcuma longa.
4. Structural characterization of Morphine.
5. Chemistry of beta lactam antibiotics.
6. New pharmaceuticals derived from biotechnology.
7. IR spectra characterization of Digitalis glycosides.

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[M.PHARM 0922]

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

Sub. Code: 2944

**M.PHARMACY DEGREE EXAMINATION
SEMESTER - I (PCI New regulations 2016)
PHARMACEUTICAL CHEMISTRY - MPC
PAPER IV - CHEMISTRY OF NATURAL PRODUCTS**

Q.P. Code : 262944

Time : Three hours Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain the application of IR, NMR and mass spectroscopic characterization of Penicillin.
2. Write the chemistry and biological significance of folic acid and vitamin A.

II. Write notes on:

(7 x 5 = 35)

1. Write the principle of DNA estimation.
2. Application of mass spectroscopy.
3. Structural elucidation of Quercetin.
4. Write a short note on diabetic therapy.
5. Discuss the structural characterization of citral.
6. Explain the stereochemistry and nomenclature of steroids.
7. Describe the chemistry of contraceptive agent for female sex hormones.

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

[M.PHARM 0423]

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

Sub. Code: 2944

**M.PHARMACY DEGREE EXAMINATION
SEMESTER - I (PCI New regulations 2016)
PHARMACEUTICAL CHEMISTRY - MPC
PAPER IV - CHEMISTRY OF NATURAL PRODUCTS**

Q.P. Code: 262944

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Write the general methods of structural determination of flavonoids and structural elucidation of quercetin.
2. Write the clinical application and recent advance in recombinant DNA technology.

II. Write notes on:

(7 x 5 = 35)

1. Write the chemistry and biological significance of vitamin A.
2. Write short notes on curcuma longa linn.
3. Write a note on Lovastatin and Dicoumarol.
4. Write the chemistry of cephalosporins.
5. Stereochemistry of Ergot.
6. Chemistry and physiological significance of cyanocobalamin.
7. Explain: Liver dysfunction.
