

MAY 2011

[KY 348]

Sub. Code: 2909

M.PHARM. DEGREE EXAMINATION

(Regulations 2010)

Candidates admitted from 2010-2011 onwards

FIRST YEAR

BRANCH III – PHARMACOGNOSY

PAPER III – BIOGENESIS AND CHEMISTRY OF NATURAL PRODUCTS

Q.P. Code : 262909

Time : Three hours

Maximum : 100 marks

Answer All questions

I. Essay Questions :

(6 x 10 = 60)

1. What are steroids? Discuss the chemistry and stereochemistry of Cholesterol.
2. Give the industrial method of isolation and estimation of
 - a) Sennosides
 - b) Diosgenin
3. Elaborate on the screening methods of cardiac activity of natural products.
4. Give a detailed note on anti fertility activity.
5. Dwell on the industrial method of isolation and estimation of
 - a) Tannic acid
 - b) Pectin
6. Explain the biosynthesis, isolation and estimation of Atropine.

II. Write Short Notes :

(8 x 5 = 40)

1. Psychopharmacological activity.
2. Forskolin.
3. Estimation of Digoxin.
4. Isolation and purification of Insulin.
5. Chemical structure, estimation and uses of Quinine.
6. Production of Vitamin B₁₂.
7. Antineoplastic activity.
8. Hepatoprotective activity.

October 2011

[KZ 348]

Sub. Code: 2909

M.PHARM. DEGREE EXAMINATION

FIRST YEAR

BRANCH III – PHARMACOGNOSY

PAPER III – BIOGENESIS AND CHEMISTRY OF NATURAL PRODUCTS

Q.P. Code : 262909

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

| | Pages (Max.) | Time (Max.) | Marks (Max.) |
|---|-------------------------|------------------------|-------------------------|
| 1. Discuss the biosynthesis, chemistry, isolation and estimation of Digoxin. | 17 | 40 | 20 |
| 2. Describe in details the various methods used for screening of Hepato protective and Diuretic activity. | 17 | 40 | 20 |

II. Write notes on :

| | | | |
|---|---|----|---|
| 1. Aromatic biosynthesis. | 4 | 10 | 6 |
| 2. Preparation of corticosteroids. | 4 | 10 | 6 |
| 3. Industrial methods of isolation of Quinine. | 4 | 10 | 6 |
| 4. Industrial methods of isolation of Hesperidin. | 4 | 10 | 6 |
| 5. Chemistry and estimation of Vitamin-A. | 4 | 10 | 6 |
| 6. Isolation and estimation of Oxytocin. | 4 | 10 | 6 |
| 7. Screening for Hypoglycemic activity. | 4 | 10 | 6 |
| 8. Biosynthesis of Vinblastine. | 4 | 10 | 6 |
| 9. Carbohydrate utilization. | 4 | 10 | 6 |
| 10. Biosynthesis and chemistry of Tetracyclines. | 4 | 10 | 6 |

[LA 348]

MAY 2012

Sub. Code: 2909

M.PHARM. DEGREE EXAMINATION

FIRST YEAR

BRANCH III – PHARMACOGNOSY

PAPER III – BIOGENESIS AND CHEMISTRY OF NATURAL PRODUCTS

Q.P. Code: 262909

Time: 3 hours
(180 Min)

Maximum: 100 marks

Answer ALL questions in the same order.

I. Elaborate on:

| Pages (Max.) | Time (Max.) | Marks (Max.) |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

- | | | | |
|--|----|----|----|
| 1. Describe in detail about various methods of screening of natural products for (i) Antineoplastic activity (ii) Antifertility activity. | 17 | 40 | 20 |
| 2. Write in detail about the occurrence, chemistry, biosynthesis and estimation of Penicillin. | 17 | 40 | 20 |

II. Write notes on:

- | | | | |
|---|---|----|---|
| 1. Isolation and estimation of Atropine. | 4 | 10 | 6 |
| 2. Screening of Invitro Antioxidant activity. | 4 | 10 | 6 |
| 3. Isoprenoid Biosynthesis and its significance. | 4 | 10 | 6 |
| 4. Chemistry of Insulin. | 4 | 10 | 6 |
| 5. Chemistry of Vitamin-B12. | 4 | 10 | 6 |
| 6. Screening for antiviral activity. | 4 | 10 | 6 |
| 7. Chemistry and therapeutic uses of Tetracyclines. | 4 | 10 | 6 |
| 8. Estimation and biosynthesis of Morphine. | 4 | 10 | 6 |
| 9. Isolation and estimation of Tannic acid. | 4 | 10 | 6 |
| 10. Stereochemistry of Cholesterol. | 4 | 10 | 6 |

[LB 348]

NOVEMBER 2012
M.PHARM. DEGREE EXAMS
FIRST YEAR
BRANCH III – PHARMACOGNOSY
PAPER III – BIOGENESIS AND
CHEMISTRY OF NATURAL PRODUCTS
Q.P. Code : 262909

Sub. Code: 2909

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

| | Pages | Time | Marks |
|--|---------------|---------------|---------------|
| | (Max.) | (Max.) | (Max.) |
| 1. Occurrence, chemistry, biosynthesis, isolation and purification of Penicillin. | 17 | 40 | 20 |
| 2. Screening methods of Cardiac activity and Antifertility activity of natural products. | 17 | 40 | 20 |

II. Write Notes on :

| | | | |
|---|---|----|---|
| 1. Isolation and purification of Insulin. | 4 | 10 | 6 |
| 2. Chemical structure, estimation and uses of Quinine. | 4 | 10 | 6 |
| 3. Screening of Invitro antioxidant activity. | 4 | 10 | 6 |
| 4. Biosynthesis and estimation of Atropine. | 4 | 10 | 6 |
| 5. Industrial method of isolation and estimation of Pectin. | 4 | 10 | 6 |
| 6. Hepatoprotective activity. | 4 | 10 | 6 |
| 7. Production of Vitamin B ₁₂ . | 4 | 10 | 6 |
| 8. Isoprenoid biosynthesis. | 4 | 10 | 6 |
| 9. Chemical structure & estimation of Sennosides. | 4 | 10 | 6 |
| 10. Isolation of Vasopressin and Oxytocin. | 4 | 10 | 6 |

[LC 348]

NOVEMBER 2012
M.PHARM. DEGREE EXAMS
FIRST YEAR
BRANCH III – PHARMACOGNOSY
PAPER III – BIOGENESIS AND
CHEMISTRY OF NATURAL PRODUCTS
Q.P. Code : 262909

Sub. Code: 2909

Time : 3 hours

Maximum : 100 marks

I. Elaborate on :

(2x20=40)

1. Study of techniques employed in the elucidation of Biosynthetic pathways.
2. General methods of screening natural products for
 - a) Hypoglycemic activity and
 - b) Diuretic activity

II. Write notes on :

(10x6=60)

1. Aromatic Biosynthesis.
2. Estimation of Digoxin.
3. Chemical structure and uses of Atropine, Folic acid and Scillaren A.
4. Industrial method of isolation and estimation of Citric acid.
5. Antiulcer activity.
6. Hepatoprotective activity.
7. Stereochemistry of Cholesterol.
8. Photosynthesis.
9. Differentiate transpiration and guttation.
10. Isolation of Hesperidin.

[LD 348]

OCTOBER 2013

Sub. Code: 2909

M.PHARM. DEGREE EXAMINATIONS

FIRST YEAR

BRANCH III – PHARMACOGNOSY

PAPER III – BIOGENESIS AND CHEMISTRY OF NATURAL PRODUCTS

Q.P. Code : 262909

Time: Three Hours

Maximum: 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

(2 x 20 = 40)

1. Describe in detail about various methods of screening of natural products for
 - a) Cardiac activity
 - b) Hepato protective activity.
2. Write in detail about the occurrence, chemistry, biosynthesis and estimation of ergometrine.

II. Write notes on :

(10 x 6 = 60)

1. Industrial methods of isolation and estimation of digoxin.
2. Screening of diuretic activity.
3. Biosynthesis of shikimic acid pathway and its significance.
4. Chemistry of oxytocin.
5. Chemistry of Vitamin C.
6. Screening for hypoglycemic activity.
7. Chemistry and therapeutic uses of semisynthetic penicillin.
8. Estimation and biosynthesis of folic acid.
9. Industrial methods of isolation and estimation of quinine.
10. Tracer techniques.

[LE 348]

APRIL 2014

Sub. Code: 2909

**M.PHARM. DEGREE EXAMS
FIRST YEAR
BRANCH III – PHARMACOGNOSY
PAPER III – BIOGENESIS AND
CHEMISTRY OF NATURAL PRODUCTS**

Q.P. Code : 262909

Time : 3 hours

Maximum : 100 marks

I. Elaborate on :

(2x20=40)

1. Write an account on the occurrence, chemistry, biosynthesis, isolation and estimation of vinblastine.
2. Write a detail note on the biological evaluation of plant products for,
a) Psychopharmacological activity.
b) Antiulcer activity

II. Write notes on :

(10x6=60)

1. Photosynthesis and its significance.
2. Isoprenoid biosynthesis and its significance.
3. Chemistry of scillaren-A.
4. Industrial methods of isolation and estimation of sennosides
5. Screening for antibacterial activity.
6. Chemistry and estimation of vasopressin.
7. Screening for anti-inflammatory activity.
8. Industrial methods of isolation and estimation of digoxin
9. Chemistry, estimation and therapeutic uses of tetracyclines
10. Chemistry and estimation of vitamin A.

[LF 348]

OCTOBER 2014

Sub. Code: 2909

**M.PHARM. DEGREE EXAMINATION
FIRST YEAR
BRANCH III – PHARMACOGNOSY
PAPER III – BIOGENESIS AND CHEMISTRY OF NATURAL PRODUCTS**

Q.P. Code : 262909

Time : Three hours

Maximum : 100 marks

I. Elaborate on:

(2 x 20 = 40)

1. Describe the occurrence, biosynthesis, chemistry, isolation and estimation of morphine.
2. Discuss the biological screening of natural products for,
 - a) Anti-inflammatory activity.
 - b) Antiviral activity.

II. Write notes on:

(10 x 6 = 60)

1. Chemistry and biosynthesis of digoxin
2. Industrial methods of isolation and estimation of diosgenin
3. Chemistry and estimation of oxytocin
4. Chemistry and biosynthesis of atropine
5. Aromatic biosynthesis and its significance
6. Screening natural products for diuretic activity
7. Chemistry of corticosteroids
8. Industrial methods of isolation and estimation of forskolin
9. Tracer techniques and its applications
10. Screening natural products for antiulcer activity
