

(LQ 2056)

MARCH 2020

Sub. Code: 2056

B.PHARM. DEGREE EXAMINATION
PCI Regulation – SEMESTER V
PAPER IV – PHARMACOGNOSY AND PHYTOCHEMISTRY – II

Q.P. Code: 562056

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Write a brief note on basic metabolic pathways leading to the formation of plant secondary metabolites.
2. What are indole alkaloids containing drugs? Discuss about any one of them in detail.
3. Explain the isolation of resin drug containing Anticancer Activity.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Vinca.
2. Bitter Almond.
3. Artemisia.
4. Ruta.
5. Liquorice.
6. Fennel.
7. Catechu.
8. Myrrh.
9. Gentian.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Give examples for secondary metabolites.
2. Define Metabolic Pathway.
3. Define electrophoresis.
4. Write the principle of HPLC.
5. Write the biological source and uses of Taxol.
6. Mention the spray reagent used to detect alkaloids.
7. Give examples for aldehyde containing volatile oil.
8. Give the official source for Mentha oil and how it is isolated from it?
9. Write the source for the four varieties of Aloes.
10. Give examples for the tannin containing drugs.

[BPHARM 0921]

SEPTEMBER 2021
(SEPTEMBER 2020 EXAM SESSION)

Sub. Code: 2056

B.PHARM. DEGREE EXAMINATION
PCI Regulation 2017 – SEMESTER V
PAPER IV – PHARMACOGNOSY AND PHYTOCHEMISTRY – II

Q.P. Code: 562056

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Summarize on Bio-synthesis and application of Digoxin.
2. Describe in detail the collection, constituents with uses and chemical test of Opium.
3. Explain the industrial production and utilization of Tropane alkaloids.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write a note on the industrial production of Forskolin.
2. Write a note on Dioscorea rhizome.
3. Illustrate the Pharmacognosy and chemistry of Rauwolfia root.
4. Write a note on collection, chemistry and uses of Taxus.
5. Chromatographic techniques used in Plant drug analysis.
6. Explain the term iridoids and give the pharmacognosy of Gentian.
7. Illustrate the isolation and estimation of podophyllotoxin from its sources.
8. Write a note on Fennel and Catechu.
9. Outline the Isolation, Identification and Analysis of menthol.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. How will you identify caffeine in tea dust?
2. What is Competitive feeding?
3. What are carotenoids?
4. Give the structure of Eugenol and Fenchone.
5. Write the basic principles involved in chromatography.
6. Mention the therapeutic use of Bitter almond
7. Write the medicinal uses of Pterocarpus
8. Mention the uses of sennosides
9. Recall the drug used in cerebral malaria give its sources.
10. Sketch the structure of glycyrrhetic acid.

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

[BPHARM 0122]

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

Sub. Code: 2056

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER V

PAPER IV – PHARMACOGNOSY AND PHYTOCHEMISTRY – II

Q.P. Code: 562056

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Describe in detail about the industrial production of Vincristine and Vinblastine.
2. Discuss the method of collection of Benzoin, its constituents and uses.
3. Briefly discuss about Biogenesis of various Isoprenoid Compounds.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Shikmic Acid Pathway.
2. Lignans.
3. Cinnamon.
4. Colophony.
5. Carotenoids.
6. Opium.
7. Curcumin.
8. Glycyrrhetic acid.
9. Citral.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Pharmaceutical application of Forskolin.
2. Write the biological source and uses of Taxus.
3. Mention the source and constituents of Tea and Ruta.
4. List out Various method of extraction of Volatile oils.
5. Give the official source for podophyllotoxin and how it is commercially significant?
6. Give the examples of phytoconstituents subjected to spectral analysis.
7. Uses of Rauwolfia.
8. Murexide Colour Reaction.
9. Chemical Test for Guggul.
10. Gambier-fluorescein Test.

[BPHARM 0522]

MAY 2022
(SEPTEMBER 2021 EXAM SESSION)

Sub. Code: 2056

B.PHARM. DEGREE EXAMINATION
PCI Regulation 2017 – SEMESTER V
PAPER IV – PHARMACOGNOSY AND PHYTOCHEMISTRY – II

Q.P. Code: 562056

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Discuss the method of extraction and the recent techniques of Isolation of phytoconstituents.
2. Elaborate on Industrial production of Podophyllotoxin.
3. Write briefly about the pharmacognosy of Digitalis.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Rauwolfia.
2. Tea.
3. Dioscorea.
4. Clove.
5. Pterocarpus.
6. Benzoin.
7. Senna.
8. Carotenoids.
9. Super Critical Fluid Extraction.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Write the use of Clevenger apparatus?
2. Define the term extraction with examples.
3. Name the alkaloids of Vinca.
4. Write the Identification test for Atropine.
5. Write the constituents and uses of Bitter almond.
6. Outline the source and uses of Artemisia and Gentian.
7. List out any two basic metabolic pathways.
8. Define Autoradiography.
9. Give the chemical test for Myrrh?
10. Write the Principle of paper chromatography.

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[BPHARM 1022]

**OCTOBER 2022
(MARCH 2022 EXAM SESSION)**

Sub. Code: 2056

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER V

PAPER IV – PHARMACOGNOSY AND PHYTOCHEMISTRY II

Q.P. Code: 562056

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Discuss the modern methods involved in the extraction of phytoconstituents.
2. Define and classify glycosides. Write a note on Digitalis.
3. Write the methods of isolation and identification of
 - a) Quinine
 - b) Glycyrrhetic acid.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Explain about acetate pathway.
2. Write a note on clove.
3. Discuss the method of isolation and identification of Curcumin.
4. Give an account on industrial method of production and utilization of Sennosides.
5. Write the biological source, chemistry and applications of Taxus.
6. Write a note on any one Solanaceous drug.
7. Give an account various method of feeding radioactive isotopes into plants.
8. Write a note on production of Podophyllotoxin.
9. Describe the biological source, chemistry and uses of Gentian.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. What is the principle involved in counter current extraction?
2. Name the steroidal resin used as antihyperlipidemic and write its biological source.
3. How the deoxy sugar in digitalis is identified?
4. Write the chemical constituents and uses of Asafoetida.
5. Write the biological source and uses of Curcumin.
6. Mention the uses of Diosgenin.
7. Write the chemical constituents and uses of Sarpagandha root.
8. Name the secondary metabolites, biosynthesized through shikimic acid pathway.
9. Write the structure and uses of Artemisinin.
10. Mention the general chemical tests used for the identification of alkaloids.

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[B.PHARM 0823]

**AUGUST 2023
(MARCH 2023 EXAM SESSION)**

Sub. Code: 2056

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER V
PAPER IV – PHARMACOGNOSY AND PHYTOCHEMISTRY II**

Q.P. Code: 562056

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Enumerate the biosynthesis of secondary metabolites through shikimic acid pathway.
2. Define and classify alkaloids. Explain about Vinca.
3. Write the industrial methods of production and utilization of
 - a) Diosgenin
 - b) Taxol.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write the chemistry and utilization of Opium.
2. What are resins? Give an account on Guggul.
3. Discuss the isolation and identification of Menthol.
4. Summarize the applications of spectral studies in the identification of phytoconstituents.
5. Differentiate Pale and Black Catechu.
6. Write a note on utilization of radioactive isotopes in the investigation of biogenetics studies.
7. Give an account on isolation and analysis of Quinine.
8. Write a note on super critical fluid extraction and its applications.
9. Summarize the pharmacognosy of Fennel.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Write the biological source and uses of Rutin.
2. Mention the different methods of extraction of volatile oils.
3. Give the applications of HPTLC.
4. Name the secondary metabolites produced through acetate pathway.
5. Write the chemical constituents of Digitalis.
6. Name and draw the structure of sesquiterpene lactone used as antimalarial drug.
7. Mention the biological source and uses of Bitter Almond.
8. Write the identification test for Atropine.
9. Define electrophoresis.
10. Write the structure and uses of Forskolin.

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[B.PHARM 1223]

**DECEMBER 2023
(SEPTEMBER 2023 EXAM SESSION)**

Sub. Code: 2056

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER V
PAPER IV – PHARMACOGNOSY AND PHYTOCHEMISTRY II**

Q.P. Code: 562056

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Describe various methods for elucidation of biosynthetic pathways.
2. What are cardiac glycosides? Write the bio source, chemistry, chemical classes and therapeutic uses of Digitalis.
3. Explain industrial production, estimation and utilization of Atropine.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Describe Autoradiography and competitive feeding.
2. Describe the Pharmacognosy of Guggul.
3. Give the biological source, Chemical constituents and uses of any two volatile oil drugs.
4. Write the isolation and estimation of Glycyrrhetic acid.
5. Describe industrial production and estimation of Diosgenin.
6. Explain the role of column chromatography in isolation and purification of phytoconstituents.
7. List the application of electrophoresis in isolation of crude drugs.
8. Write the pharmacognosy of pterocarpus.
9. Write the estimation and uses of sennosides.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Liquid scintillation counter.
2. Write botanical source and uses of any one drug belonging to the family Liliaceae.
3. Write botanical source and chemical constituents of Gentian.
4. Add a note on taxol.
5. Utilization of Vinca alkaloids.
6. List the applications of HPTLC.
7. Give the chemical structure Quinine and Caffeine.
8. Give the adulterants of Clove bud.
9. Write a note on lignans.
10. Discuss the percolation.
