APRIL - 1993

[RS 561]

FOURTH B.Pharm. DEGREE EXAMINATION.

(Old Regulations)

Paper IV — APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

Draw diagrams wherever necessary.

1. What are the principles underlying the separation of phytoconstituents by adsorption and partition chromotography?

Mention the applications of these techniques in the separation of plant constituents. (10 + 10)

2. Mention the method of preparation of potato starch in a commercial scale. Compare the microscopy of different official starches. (12 + 8)

3. What is the source of alginates? Describe the preparation of sodium alginate from the sea weeds. Write the chemical nature of its constituents and chemical tests to identify them. (2 + 10 + 8)

4. Write notes on :

(a) Difference of cotton and wool by chemical tests.

(b) Comparison of constituents and uses of sharkliver oil with codliver oil.

(c) Importance of Papain in therapeutics.

(d) Preparation of silk.

5. Define alkaloids. Give the general tests for alkaloids. Give the detailed method of isolation of Quinine from Cinchona. (2 + 4 + 14)

6. Write the biosynthetic pathway leading to the formation of Hyoscyamine. Compare its activity with that of atropine. (15 + 5)

7. Write the various methods of classification of crude drugs. (20)

———————

NOVEMBER -1993

[PR178]

FOURTH B.Pharm. DEGREE EXAMINATION.

(Old Regulations)

Paper IV — APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

Answer ALL questions.

Draw diagrams wherever necessary.

1. What are the microscopical and chemical methods of identification of the following drugs in powder form from their possible adulterants : (8 + 6 + 6)

(a) Clove.

(b) Belladonna.

(c) Digitalis.

2. Describe the detailed method of extraction and isolation of the therapeutically active alkaloids of vinca.

Give its chemical nature and uses. (15 + 5)

3. What are glycosides? Give a suitable method of classification of glycosides.

Give the method of preparation of total sennosides from the leaves. (3 + 5 + 12)

4. Write short notes on : (4 x 5 = 20)

(a) Comparison of characteristics of cinnamon powder and cinchona powder microscopically and by chemical tests.

(b) Tissue culture as a tool of plant breeding.

(c) Macroscopical and microscopical comparison of Fennel and Coriander.

(d) Menthol – preparation and its importance.

5. What is the source of cotton? Describe the method of preparation of absorbent cotton from raw cotton.

How is absorbent cotton tested micro – chemically to distinguish from raw cotton. (2 + 14 + 4)

6. How are the following prepared : (10 + 10)

(a) Citric acid from lemon peel.

(b) Agar from sea weeds.

7. Describe the modern techniques of extraction and isolation of phyto constituents giving emphasis to chromatography and electrophoresis. (20)

NOVEMBER - 1994

[ND 600]

FOURTH B.Pharmacy DEGREE EXAMINATION.

(New Regulations)

Paper IV

APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 90 marks

Two and a half hours for Sections A and B Sections A and B : 60 marks

Answer ALL questions.

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

Draw diagrams wherever necessary.

SECTION A

Answer any TWO questions.

1. Describe all the Basic Metabolic pathways. (15)

2. Describe the commercial method of production for the following phytopharmaceuticals : (5 + 5 + 5)

(a) Citric acid.

(b) Sennosides.

(c) Quinine.

3. Explain the various Tissue culture techniques with special reference to suspension cultures and single cell cultures. (15)

4. Discuss the importance of chromatography in isolation, purification and identificataion of phytoconstituents from crude drugs. (15)

SECTION B

Write short notes on any SIX : (6 × 5 = 30)

5. Preparation of silk.

6. Alkaloids.

7. Microscopical comparison of fennel and coriander.

8. Electrophoresis.

9. Chemistry of volatile oil and its uses.

10. Detection of adulterants in crude drugs.

11. Biosynthesis of Tropone alkaloids.

12. Botanical source, chemical constituents and uses of Ipecac.

13. Advantages of pharmacological method of classification over other methods.

APRIL - 1995

[SB 600]

Fourth B. Pharm Degree Examination

(Old Regulations)

Paper IV-APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 100 Marks

Answer any Five questions

Draw diagrams wherever necessary

All questions carry equal marks

1. Give an account of method of classification of crude drugs based on chemical nature of bio-active moiety. (20)

2. Describe the biogenetic pathways for following phytoconstituents
   a) Tropane alkaloids
   b) Pentacyclic triterpenoids (10+10)

3. a) Describe the nutritional requirements of plant tissue cultures.
   b) Discuss applications of tissus culture technique in pharmacy. (10+10)

4. Give an account of different methods used in extraction of alkaloids from plant material. (20)

5. Discuss the method of preparation of following
   a) Absorbent cotton
   b) Agar
   c) Papain (7+7+6)

6. Write short notes on the following
   a) Microscopic characteristics of powdered senna
   b) Chemotaxonomy
   c) Extraction of sennosides
   d) Pectin (4×5=20)

7. a) Write a note on commercial starches
   b) Describe microscopy of powdered umbelliferous fruits. (10+10)

APRIL - 1995

[SB 605]

Fourth B. Pharm. Degree Examination

(New Regulations)

Paper IV - APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours — Maximum : 90 marks
Two and a half hours for Sections A and B — Sections A and B : 60 marks

Answer Sections A and B in separate answer books
Answer Sections C in the answer sheet provided

SECTION - A (2×15 = 30)

Answer any TWO questions

1. Give an account of pharmacological classification of crude drugs.

2. Describe different techniques employed for extraction of volatile oils from plants.

3. Discuss applications of plant tissue cultures with suitable examples.

4. Write note on tropane alkaloids and describe its biosynthesis. Give the source and constituent of two drugs containing tropane alkaloid.

SECTION—B

(6×5 = 30)

5. Write notes on Answer any SIX :

   a) Commercial starches

   b) Manufacture of Agar-agar

   c) Extraction of alkaloids

   d) Papain

   e) Artificial fibres of use in pharmacy

   f) Vasaka

   g) Chemotaxonomy

   h) Biogenesis of steroidal compounds

   i) Isolation of quinine

———

NOVEMBER - 1995

[redacted] 732

FOURTH B.PHARM DEGREE EXAMINATION
(Old Regulations)
Paper IV - APPLIED AND ADVANCED PHARMACOGNOSY

Time: Three hours Max. 100 marks.

Answer any Five questions.
All questions carry equal marks.
Draw Diagrams wherever necessary

I. Describe the microscopical characters which are useful in identifying the following drugs in the powder form
   a). Fennel
   b). Pyrethrum
   c). Digitalis
   d). Cardamom

II. Describe the biogenesis of steroidal glycosides.

III. Describe the commercial production of Quinine

IV. Describe the importance of Tissue culture in pharmacognosy.

V. Describe the prospects for phytopharmaceuticals.

[redacted]. Explain the newer methods of identification of plant constituents.

VII. Write short notes on:
   a). Microscopy of Ipecac
   b). Chromatography
   c). Wheat starch
   d). Cardiac glycosides
   e). Flax

NOVEMBER - 1995

[MB 737]

Fourth B. Pharm Degree Examination

(New Regulations)

Paper IV - APPLIED AND ADVANCED PHARMACOGNOSY

Time Three hours — Max : 90 marks
Two and a half an hour for Sec. A and B — Sec. A and B : 60 marks

Answer Sections A and B in separate answer books
Answer Section C in the answer sheet provided
Draw diagrams wherever necessary

SECTION—A (2X15=30)

Answer any Two questions.

1. Describe the commercial method of production of
   a) Senna glycosides
   b) Quinine

2. Describe the microscopy of the following drugs in the powder form
   a) Cinchona
   b) Fennel
   c) Clove
   d) Rauwolfia

3. What are glycosides ? How are they classified ? Give examples of each group. Describe the chemistry of cardiac glycosides

4. Describe the biogenitic pathway of Tropane alkaloids

SECTION - B (6X5=30)

5. Write Short notes on any Six :
   a) Embryo culture
   b) Chemotaxonomy
   c) Volatile oils
   d) Thin layer chromatography
   e) Electrophoresis
   f) Absorbent cotton
   g) Potato starch
   h) Shark liver oil
   i) Saponin glycosides

———

APRIL - 1996

[AK 737]

Fourth B. Pharm Degree Examination

(Old Regulations)

Paper IV - APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours Max. : 100 marks

Answer any FIVE questions

All questions carry equal marks.

Draw diagrams wherever necessary.

1. How are crude Drugs classified ? Describe the chemical and pharmacological classification of crude drugs.
2. Classify glycosides. Explain each group with examples.
3. Describe the biogenesis of Tropane Alkaloids.
4. Describe the preparation of potato starch. Compare the microscopy of the potato starch with other starches you have studied.
5. Describe the preparation of Agar. Give the chemical constituents, chemical tests and uses of Agar. How will you differentiate Agar and gelatin ?
6. Describe the commercial method of preparation of senna Glycosides.
7. Write notes on :
   a) Microscopy of cinnamon
   b) Amino Acids
   c) Nylon
   d) Cod liver oil
   e) Terpenes

APRIL - 1996

[AK 742] Subject Code : 4219

Fourth B. Pharm Degree Examination

(New Regulations)

Paper IV - APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours. Maximum : 90 marks.

Two and a half hours for Section A and B Sec. A and B : 60 marks

Answer Sections A and B in separate answer books.
Answer Section C in the answer sheet provided.
Draw diagram wherever necessary.

SECTION—A (2X15=30)

Answer any TWO questions

I. Describe microscopy of the following drugs in the powder form
   1. Nuxvomica
   2. Liquorice
   3. Ginger
   4. Coriander

II. Describe the commercial method of production of
   1. Vinca Alkaloids
   2. Menthol

III. Describe the biogenesis of Digitalis glycosides

IV. What are alkaloids? How are they classified? Give examples of each group. Describe the chemistry of opium alkaloids.

SECTION—B (6X5=30)

V. Write short notes on any SIX :
   1. HPTLC
   2. Jute
   3. Sodium alginate
   4. Papain
   5. Production of citric acid
   6. Rice starch
   7. Adulterents of Digitalis
   8. Volatile oils

OCTOBER - 1997

[MS 728] **Sub. Code : 4219**

FOURTH B.Pharm. DEGREE EXAMINATION.

(New Regulations)

Paper IV — APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours — Maximum : 90 marks
Two and a half hours for Sec. A and B — Sec. A & B : 60 marks
Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Compare the powder microscopy of the following pairs of drugs :
   (a) Cinchona and Ashoka.
   (b) Nux vomica and Cardamom.
   (c) Senna and Vasaka

2. How are the following prepared and tested?
   (a) Rayon.
   (b) Jute.
   (c) Maize.

3. (a) Explain the different classes of ingredients required for plant tissue culture.

   (b) Discuss the classification of enzymes with a note on papain.

[MS 728]

SECTION B — (6 × 5 = 30 marks)

4. Write briefly on SIX of the following :
   (a) Classification of drugs.
   (b) Chemistry of proteins.
   (c) Preparation of volatile oils.
   (d) Use of TLC technique.
   (e) Utilisation of radio active materials in biogenesis of plant metabolites.
   (f) Pyrethrum flower.
   (g) Mustard seed.
   (h) Alginates.

OCTOBER - 1997

[MS 733] Sub. Code : 4224

FOURTH B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — ADVANCED PHARMACOGNOSY

Time : Three hours — Maximum : 90 marks

Two and a half hours — Sec. A & B : 60 marks

for Sec. A and B — Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Define alkaloids. Mention the general method of classification of alkaloids based on the structure.

Give a scheme of the biogenetic formation of Hyoscyamine. (5 + 10)

2. Describe the principle underlying the chromatographic separation technique using T.L.C. and Paper Chromatography

Give the method of column chromatography using any one of the above principles to separate a crude plant extract containing either alkaloids or glycosides as active principles. (6 + 9)

3. Describe the significance and method of the following estimations. :

(a) Total ash value and acid-insoluble ash value.

(b) Water-soluble extractive value and alcohol-soluble extractive values

(c) Detection of adulterants in clove powder. (5 + 5 + 5)

4. Give the commercial method of preparation of the following :

(a) Quinine.

(b) Total sennosides. (7 + 6 + 2)

Give one specific chemical test for each of the above two phytoconstituents.

SECTION B — (6 × 5 = 30 marks)

5. Write briefly on any SIX :

(a) Macroscopic and Microscopic characters of Absorbant and Raw Cotton.

(b) Preparation of shark liver oil for medicinal use.

(c) Papaine — its source, preparation and uses.

(d) Natural insecticidal agents of export potential.

(e) Standardization of Aristas.

(f) Marine algae.

(g) Application of plant tissue culture in pharmacognosy.

(h) Umbelliferous fruits — its general macroscopical and microscopical characters.

(i) Chemotaxonomy and serotaxonomy as basis of classification of crude drugs.

APRIL - 1998

[SV 728] **Sub. Code : 4219**

FOURTH B.Pharm. DEGREE EXAMINATION.

(New Regulations)

Paper IV — APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours — Maximum : 90 marks

Two and a half hours — Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B — Sec. C : 30 marks

Answer Section A and B in separate answer books.

Answer Section C in the answer book provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Give an outline of the principle and method of isolation of the following : (2 × 7½)

(a) Casein from milk

(b) Starch from potato.

2. Give the general pathway of formation of primary metabolites and corresponding secondary metabolites that are formed by biogenesis in plant cells.

Give a brief description of the technique that is employed to trace the precursor-product sequence in the biogenetic study. (10 + 5)

3. Name the natural products that are obtained from marine source.

Describe the pharmacognosy of any ONE of them with details of its source, preparation for the market and the chemical parameters to determine its quality. (3 + 12)

SECTION B — (6 × 5 = 30 marks)

4. Write briefly on SIX of the following :

(a) General characters of trichomes as seen in the drugs you have studied.

(b) Microscopical comparison of Fennel and Coriander powders.

(c) Theory involved in Adsorption and Partition chromatography techniques.

(d) Microscopical and chemical differentiation between cotton and silk.

(e) Organ culture and its applications.

(f) Classification of crude drugs based on Pharmacological action.

(g) Microscopical comparison of different official starches.

(h) Determination of Eugenol content in clove oil.

APRIL - 1998

[SV 733] Sub. Code : 4224

FOURTH B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 90 marks

Two and a half hours Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Write an account on cell culture with the aim of growing particular plant cells on a commercial scale for the production of secondary metabolites with emphasis on induced secondary metabolism in cell cultures.

2. With the aid of a flow sheet, write the process and operation of production of penicillin by fermentation.

3. How do you prepare the following commercially : (7 + 8)

(a) Sennosides

(b) Vincristine and Vinblastine.

4. Give an outline of biogenetic formation of bufadienolides and cardenolides type of glycosides through isoprenoid synthesis.

SECTION B — (6 × 5 = 30 marks)

5. Write briefly on any SIX :

(a) Determination of alcohol extractive value and its significance

(b) Preparation of viscose rayon

(c) Preparation of agar from red algae

(d) Difficulties that are encountered in standardizing phytopharmaceuticals of Ayurvedic formulations

(e) T.L.C separation of crude extract of Nux-Vomica for Strychnine and Brucine

(f) Preparation of absorbent cotton from comber waste

(g) Significance and method of determination of stomatal index

(h) Distinction of agar and gelatin by chemical tests

(i) Various systems of classification of crude drugs.

———

OCTOBER - 1998

[SM 728] **Sub. Code : 4219**

FOURTH B.Pharm. DEGREE EXAMINATION.

(New Regulations)

APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours — Maximum : 90 marks

Two and a half hours — Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B — Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

1. Compare the powder microscopy of the following pairs of drugs : (5 + 5 + 5)

   (a) Senna and Digitalis.

   (b) Fennel and Ginger.

   (c) Ipecac and Rauwolfia.

2. (a) Define glycosides. Classify glycosides based on chemical nucleus. Give the biosynthesis of Digitoxin. (1 + 2 + 7)

   (b) Give the method of preparation of an alkaloid used for malaria. (5)

3. Define starch. Give the various source of starch. Discuss in detail the industrial production of various types of starches you have studied and give their microscopical features. (1 + 2 + 8 + 4)

SECTION B — (6 × 5 = 30 marks)

4. Answer any SIX :

   (a) Serotaxonomy.

   (b) Cod liver oil.

   (c) Papain.

   (d) Electrophoresis.

   (e) Keratin.

   (f) Production of Menthol.

   (g) Volatile oils.

   (h) Principles of thin layer chromatography.

OCTOBER - 1998

[SM 733] **Sub. Code : 4224**

FOURTH B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

ADVANCED PHARMACOGNOSY

Time : Three hours **Maximum : 90 marks**

Two and a half hours **Sec. A & Sec. B : 60 marks**

for Sec. A and Sec. B **Section C : 30 marks**

Answer Section A and B separately.

Answer Section C in the sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

All questions carry equal marks.

1. Discuss in detail the various methods involved in extraction, purification and identifieation of phyto constituents of crude drugs. (5 + 5 + 5)

2. (a) Define Tissue culture. Describe various techniques involved in tissue culture. (10)

   (b) Biotransformation. (5)

3. Give the various steps involved in the biosynthesis of

   (a) Bufadienolide. ($7\frac{1}{2}$)

   (b) Aromatic amino acids. ($7\frac{1}{2}$)

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

All questions carry equal marks.

4. (a) Production of Penicillin by fermentation.
   (b) Menthol.
   (c) Serotaxonomy.
   (d) Standardisation of churna.
   (e) Determination of crude fibre content.
   (f) An enzyme from animal source.
   (g) Absorbable haemostats.
   (h) Preparation of fixed oil having both Vitamin A and Vitamin D.

———

APRIL - 1999

[SG 728] **Sub. Code : 4219**

FOURTH B.Pharm. DEGREE EXAMINATION.

(New Regulations)

Paper IV — APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours — Maximum : 90 marks

Two and a half hours — Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B — Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Give labelled diagrams wherever necessary.

1. (a) Give the various methods of classification of crude drugs of biological origin with examples. (7)

(b) What is Chemotaxonomy? Explain the importance and advantages of Chemotaxonomy in Pharmacognosy with examples. (8)

2. (a) What are Glycosides? Mention the different types of glycosides present in plant drugs. (5)

(b) Write notes on Anthraquinone glycosides and its identification by T.L.C. and Chemical Tests. (5)

(c) Give the extraction, Isolation and production of Senna glycosides. (5)

3. (a) Define alkaloids. Give examples of drugs containing important groups of alkaloids. (5)

(b) Give the production and utilization of Vinca alkaloids. (5)

(c) Give the Biogenesis of Tropane alkaloids. (5)

SECTION B — (6 × 5 = 30 marks)

4. Answer any SIX of the following :

(a) What are the different types of column chromatography, employed for the separation and isolation of phytoconstituents?

(b) Write briefly on volatile oils and volatile oil containing plant drugs.

(c) Compare the microscopical characters and the chemical constituents of Cinnamon powder and Cassia Cinnamon powder.

(d) Give the microscopical and chemical differences between :

(i) Cotton wool and Animal wool.

(ii) Alginate powder and Agar Powder.

(e) Give the importance of Tissue Culture as a tool for

(i) Genetic engineering

(ii) Production of Secondary metabolites.

(f) Write briefly on basic tissue culture media.

(g) Give the chemical tests to identify proteins and other nitrogeneous plant constituents.

(h) Give the microscopical characters of Liquorice powder and Digitalis powder.

———————

APRIL - 1999

[SG 733] Sub. Code : 4224

FOURTH B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 90 marks

Two and a half hours Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. With the help of suitable examples, describe the methods of investigation in biogenic studies using radioactive tracers.

2. Discuss about the regulators of plant growth with special emphasis on auxins and gibberellins.

3. What is the role of quantitative microscopy in the evaluation of powdered crude drugs? Give suitable examples.

4. Write a note on the natural products obtained from marine source with their sources, characters, constituents and pharmaceutical uses.

SECTION B — (6 × 5 = 30 marks)

5. Write briefly on any SIX :

(a) Estimation of moisture content in crude drugs

(b) Preparation of absorbent cotton

(c) Utilisation of modern analytical techniques like UV, IR and chromatography for the standardisation of Ayurvedic formulations

(d) Chemical classification of crude drugs

(e) Commercial production of citric acid

(f) Common characteristics of umbelliferous fruits

(g) Significance of ash values in the quality control of crude drugs

(h) Recent developments in tissue culture techniques like immobilised cell culture, root tip culture and protoplast culture

(i) Medicinal and pharmaceutical uses of the enzymes papain and pepsin.

———

OCTOBER - 1999

[KA 728] **Sub. Code : 4219**

FOURTH B.Pharm. DEGREE EXAMINATION.

(New Regulations)

Paper IV — APPLIED AND ADVANCED PHARMACOGNOSY

Time : Three hours — Maximum : 90 marks

Two and a half hours for Section A and B — Section A & B : 60 marks, Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

1. Compare the powder microscopy of the following pairs of drugs.

   (a) Cinnamon and Licorice.

   (b) Fennel and Coriander.

2. How are the following prepared and tested?

   (a) Shark–Liver oil

   (b) Absorbent cotton

   (c) Papain.

3. (a) Explain the commercial method of producing sennaglycosides.

   (b) Biosynthesis of Tropane Alkaloids.

SECTION B — (6 × 5 = 30 marks)

4. Answer any SIX :

   (a) Plant growth hormones

   (b) Commercial starches

   (c) Eugenol containing drugs

   (d) Chemical classification of crude drugs

   (e) Preparation of Agar

   (f) Production of static cultures

   (g) Principles and application of Electrophoresis

   (h) Significance of Trichomes in the crude drugs in powdered condition.

———————

OCTOBER - 1999

[KA 733] **Sub. Code : 4224**

FOURTH B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

ADVANCED PHARMACOGNOSY

Time : Three hours **Maximum : 90 marks**

Two and a half hours **Sec. A & Sec. B : 60 marks**

for Sec. A and Sec. B **Section C : 30 marks**

Answer Sections A and B in separate Answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

1. (a) Enumerate the different metabolic pathways with their utility.

(b) How is Atropine Biosynthesized?

(c) Write briefly on the role of Auxin.

2. Give an account of the following :

(a) Production of Sennosides

(b) Fermentative production of Penicillin G.

3. Give the different systems of classifying Crude drugs with suitable examples and emphasis on the application of chemotaxonomy and serotaxonomy.

4. (a) Present a monograph on Shark liver oil and give its method of preparation.

(b) Mention the differences between cod liver oil and shark liver oil.

(c) Write briefly on Dilute shark liver oil I.P.

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

5. (a) Surgical cat gut.

(b) Electro chromatography

(c) Preparation of Papain and its uses

(d) Aasavas and Aristas

(e) Extractive valuee and their significance

(f) Commercial production of citric acid

(g) Application of Lycopodium spore method in the evaluation of crude drugs

(h) Cell immobilization and protoplasmic fusion techniques applications.

APRIL - 2000

[KB 733] Sub. Code : 4224

FOURTH B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 90 marks

Two and a half hours Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions only.

1. Define Agar. Describe the methods of preparation, chemistry and uses of Agar. Mention its distinguishing tests. (1 + 4 + 4 + 2 + 4 = 15)

2. Give an account of the following : (15)

(a) Industrial production of quinine.

(b) Absorbable Haemostatic dressings.

3. Write an account on 'Export Potential of Medicinal Plants and their derivatives'.

4. Describe the principles involved in the preparation and standardization of Ayurvedic formulations such as Asawas, Arishtas, Avaleha and Churna.

SECTION B — (6 × 5 = 30 marks)

5. Write briefly on any SIX :

(a) Significance of the study of Ash, Acid insoluble ash and water soluble ash values.

(b) Significance of the study of quantitative microscopy in Pharmacognosy.

(c) Serotaxonomy.

(d) Volatile oils of Umbelliferous fruits.

(e) Senna Glycosides.

(f) Plant Tissue Culture.

(g) Growth Regulators.

(h) Utilization of 'Radio active Isotopes' in biogenetic studies.

(i) Vinca alkaloids.

———

OCTOBER - 2000

[KC 733] Sub. Code : 4224

FOURTH B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — ADVANCED PHARMACOGNOSY

Time : Three hours Maximum : 90 marks

Two and a half hours Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Define Asava and give the principle involved in its preparation and standardization. (10)

(b) Briefly describe the production and utilization of quinine. (5)

2. (a) Define the term "Plant tissue culture" and discuss the applications of plant tissue culture in the production of biomedicinals. (7)

(b) What are enzymes? Give the pharmaceutical importance of pectin, pepsin and papain. (8)

3. Give the sources, characters, constituents and uses of any three drugs of marine origin. (15)

SECTION B — (6 × 5 = 30 marks)

4. Write short notes on any SIX :

(a) Serotaxonomy

(b) Auxins.

(c) Applications of electrophoresis in the identification of phytoconstituents of crude drugs.

(d) Utilisation of radio active materials in the study of biosynthesis of phytopharmaceuticals.

(e) Application of plant tissue culture in the production of secondary metabolites.

(f) Define "Surgical dressing's give the preparation of absorbant cotton.

(g) Shikimic acid pathway

(h) Extraction of volatile oils.

———————