

OCTOBER 1996

M.Pharm DEGREE EXAMINATION

PK 214

First year

(New Regulations)

Branch V - Pharmaceutical Analysis

**PHARMACOGNOSTICAL & BIOLOGICAL METHODS OF
PHARMACEUTICAL ANALYSIS**

Time: Three hours

Max.marks:100

Answer any FOUR questions

All questions carry equal marks

1. (a) Give an account of systematic phytochemical analysis of a plant extract.
(b) Describe a method for the detection of adulterants present in a powdered drug.
2. (a) Describe a method for the biological assay of Insulin.
(b) Explain the bio-assay of Adrenaline.
3. (a) Describe the 'Cup-plate method' for screening of antimicrobial activity.
(b) Explain the microbiological assay used in the determination of Penicilline.
4. Write briefly on the following:
 - (a) Production of Immuno-assay reagents
 - (b) Chemical microscopy and micro-chemical tests in pharmacognostical analysis
 - (c) Biological test for Haemolysins
 - (d) Biological test for Histamine like substances.
5. (a) Give an account of homogeneous and heterogeneous immuno-assay systems
(b) Give the biological tests for each of the blood groups (A,B,O) and Rh factor.
6. (a) What is Acute toxicity and how do you determine it? Explain.
(b) Describe a biochemical method of estimating serum cholesterol.

APRIL 1997

M.Pharm DEGREE EXAMINATION

MP 266 (New Regulations)

First year

Branch V - Pharmaceutical Analysis

Paper III - PHARMACOGNOSTICAL & BIOLOGICAL METHODS OF
PHARMACEUTICAL ANALYSIS

Time: Three hours

Max.marks:100

Answer any FOUR questions

All questions carry equal marks.

1. Discuss how HPLC and HPTLC are useful for the isolation and identification of plant constituents.
2. Explain the principle and procedure of
 - (a) Bioassay of hormones
 - (b) Biochemical estimation of serum endesterol
 - (c) Determination of acute toxicity
3. (a) Discuss the techniques used for screening a new drug for antimicrobial activity.

(b) Explain the principle and procedure for the microbiological assay of vitamins.
4. Discuss the various techniques used in the immunoassay of drugs. Explain their advantages over other techniques.
5. Write notes on:
 - (a) Proximate analysis of crude drugs
 - (b) Bioassay of rabies vaccines
 - (c) Pyrogens test.

OCTOBER 1997

M.Pharm. DEGREE EXAMINATION

MS 250

(New Regulations)

First Year

Branch V - Pharmaceutical Analysis

**Paper III - PHARMACOGNOSTICAL & BIOLOGICAL METHODS OF
PHARMACEUTICAL ANALYSIS**

Time: Three hours

Max. marks:100

Answer any FOUR questions

All questions carry equal marks

1. The seeds of a plant are suspected to contain an alkaloid. Describe the methodology you will adopt to explore its usefulness as a drug for clinical use.
2. Explain the principle of the following:
 - (a) Bio-assay of Digitalis
 - (b) Bio-assay methods of autacoids
 - (c) Determination of LD-50.
3. (a) Explain the microbiological assay methods for Vitamins, giving examples.

(b) Discuss the methods used for the bio-assay of Diphtheria Tetanus Pertussis vaccine.
4. Explain the principles, technique, applications and limitations of immunoassay of drugs.
5. Write notes on:
 - (a) Quantitative microscopy
 - (b) ABO and Rh groups - their determination
 - (c) Quality control of Ayurvedic preparations.

APRIL 1998

[SV 282]

M.Pharm. DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Pharmaceutical Analysis

**Paper III — PHARMACOGNOSTICAL AND BIOLOGICAL
METHODS OF PHARMACEUTICAL ANALYSIS**

Time : Three hours

Maximum : 100 marks

Answer any FOUR questions.

All questions carry equal marks.

1. (a) Explain the different methods of extraction, isolation and identification of Flavanoids.
(b) Discuss the different chromatographic techniques adopted in the isolation and purification of Alkaloids.
2. (a) What are the different parameters including the instrumental methods of analysis to determine the quality of the powdered crude drugs?
(b) Write a note on common adulterants and insect infestation in powdered drugs.
3. Write briefly on :
 - (a) Analysis of Ayurvedic preparations
 - (b) Test for the absence of pyrogens
 - (c) Test for homogeneity of the Antitoxins
 - (d) Biological test for *Mycobacterium tuberculosis*.
4. Explain how the different immunoassay reagents are produced. What are the different methods of evaluating immunoassay procedures?

5. (a) Explain the principle and procedure involved in the Bio-assay of Epinephrine and norepinephrine.

(b) Suggest suitable modifications and improvements to develop new bio-assay methods.

6. (a) Explain the principle and procedure involved in plate method and serial dilution techniques for testing the antimicrobial activity of different antibacterial compounds.

(b) Write briefly on the bio-assay of rabies and small pox vaccines.

OCTOBER 1999

[KA 282]

M.Pharm. DEGREE EXAMINATION.

(New Regulations)

Branch V — Pharmaceutical Analysis

**Paper III — PHARMACOGNOSTICAL AND
BIOLOGICAL METHODS OF PHARMACEUTICAL
ANALYSIS**

Time : Three hours

Maximum : 100 marks

Answer any FOUR questions.

All questions carry equal marks.

1. (a) What do you mean by LD₅₀? Explain in detail the determination of LD₅₀.

(b) Explain the bioassay of oxytocin. (15 + 10)

2. (a) Name the Immuno assay methods you have studied. Explain in detail any one of them.

(b) How will you estimate Blood glucose level?
(15 + 10)

3. Write notes on the following : (9 + 9 + 7)

(a) Microbiological assay of vitamin B₁₂.

(b) Bio assay of Diptheria vaccine.

(c) Detection of A, B, O and Rh group.

4. (a) Write notes on Sham test.

(b) How will you detect living contaminants in vaccine?

(c) Explain LAL test.

(d) Explain the use of fluorescence technique in phytochemical investigation. (5 + 7 + 8 + 5)

5. (a) Explain the role of Lycopodium in microscopic examination of powdered crude drugs.

(b) Give an account on the most common types of adulteration of crude drugs, with example.

(c) Write notes on various extractive values.
(6 + 10 + 9)

APRIL 2000

[KB 282]

M. Pharm. DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Pharmaceutical Analysis

**Paper III — PHARMACOGNOSTICAL AND
BIOLOGICAL METHODS OF PHARMACEUTICAL
ANALYSIS**

Time : Three hours *APR 2000* Maximum : 100 marks

Answer any FOUR questions.

All questions carry equal marks.

1. (a) Explain the different methods of extraction, isolation and identification of steroids.

(b) Discuss the significance of different chromatographic techniques in identification, isolation and purification of plant constituents.

2. (a) Explain the significance of proximate analysis, ash value, and extractive value in the identification of powdered crude drugs.

(b) Write a note on Qualitative and Quantitative microscopy.

3. Write short notes on :

(a) Analysis of Herbal products

(b) Test for absence of pyrogens

(c) Test for living contaminants of vaccines

(d) Test for blood grouping.

4. What are the different principles involved in Immunoassay methods? Explain the optimization, Heterogeneous and Homogenous immunoassay methods.

5. (a) What are the different biochemical methods adopted in estimating various physiological constants of the body and explain their significance.

(b) Determination of LD-50 and its significance.

6. Suggest suitable microbiological assay methods for any two vitamins and two antibiotics official in I.P.

OCTOBER 2000

[KC 282]

M.Pharm. DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Pharmaceutical Analysis

**Paper III — PHARMACOGNOSTICAL AND
BIOLOGICAL METHODS OF PHARMACEUTICAL
ANALYSIS**

Time : Three hours Maximum : 100 marks

Answer any FOUR questions.

All questions carry equal marks.

1. (a) Explain the use of chromatographic techniques in the phytochemical investigation of plant constituents. Give suitable examples.

(b) Write about extractive values. (18 + 7)

2. Explain in detail the principle and technique involved in the Bioassay of the followings :

(a) Insulin.

(b) Digitalis. (15 + 10)

3. (a) Explain the serial dilution technique for the evaluation of antimicrobial activity.

(b) How will you estimate total cholesterol in blood? (13 + 12)

4. (a) Explain the assay of tetanus antitoxin.

(b) How will you detect histamin like substances? (13 + 12)

5. Write an essay on the principle, preparation of labelled antigen and antibody and the technique of radio immuno assay of any one hormone.

6. Write notes on the following :

(a) Explain the test for pyrogen in parenteral preparation.

(b) Explain the Bioassay of small pox vaccine.

(c) Give an account of determination of urinary excretion of Dextran.