

# **FIRST YEAR B PHARM**

## **SCHEME OF *PRACTICAL* EXAMINATION & SCHEME OF VALUATION**

(from 2010 admission onwards)

### **PHARMACEUTICAL CHEMISTRY- I ( INORGANIC & PHYSICAL CHEMISTRY)**

(Time : 4 hrs , Max Marks : 70)

**1. Synopsis- 10 marks**

Two questions of 5 marks each.

Principle involved in the experiments mentioned in the syllabus.

**2. Titrimetric assay of any one inorganic compound. 30 marks**

Weighing of assay sample to be done .

Strength of the titrant solution to be provided.

Evaluation of assay done based on percentage error of result.

0 % - 1% error - 30 marks

1% - 2% error - 25 marks

2% - 3% error - 20 marks

3% - 5% error - 15 marks

4% - 10% error - 10 marks

Above 10% error, 5 marks to be given provided the candidate has performed the whole experiment including the calculation correctly..

**2. Limit test 15 marks**

The limit test of any one of the following impurities to be carried out in the sample provided.

a. Chloride    b. Sulphate    c. Iron    d. Heavy metals.

Test sample should be provided in the original raw material form. The candidate should be aware of the sampling techniques. Official Pharmacopoeias are to be provided for reference.

Marks may be awarded based on the general presentation and the analytical interpretation of the results.

**4. Preparation of the inorganic compound. 15 marks**

Marks may be awarded, taking into consideration, the colour, nature and dryness of the compound.

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**PHARMACEUTICAL CHEMISTRY- II**  
**(ORGANIC CHEMISTRY)**

(Time : 4 hrs , Max Marks : 70)

**1. SYNOPSIS**

**10 marks**

Two questions carrying 5 marks each.

May include (i) Qualitative tests for different functional groups and /or  
(ii) Principles of preparation of organic compounds.

**2. MAJOR EXPERIMENT**

**40 marks**

Identification of an unknown organic compound by a systematic qualitative analysis.

Students shall not report the compound with its specific name.

Report the result as -aliphatic/aromatic.

-saturated/unsaturated.

-special element contained in it (like nitrogen, sulphur,  
halogens or phosphorus)

-functional group(s) it contains.

Compounds having the following functional groups may be given.

(i) Alcohol (ii) Aldehyde (iii) Ketone (iv) Amines (v) Carboxylic acids (vi) Phenolic acids (vii) Hydrocarbons (viii) Esters (ix) Amides and Diamides (x) Phenols (xi) Carbohydrates (xii) Nitro compounds.

Preparation of a derivative of the organic compound is not implicated.

**3. MINOR EXPERIMENT**

**20 marks**

Preparation of an organic compound through a one step reaction.

Preparation of the following compounds shall be included.

- (i) Preparation of Aspirin
- (ii) Preparation of Acetanilide
- (iii) Preparation of Iodoform
- (iv) Preparation of Benzamide
- (v) Preparation of Phenyl benzoate
- (vi) Preparation of Benzanilide
- (vii) Preparation of Benzaldehyde phenyl hydrazone
- (viii) Preparation of Benzene azo-2-naphthol
- (ix) Preparation of *p*-Nitroacetanilide
- (x) Preparation of *p*-Bromoacetanilide

***Scheme of valuation***

(I) SYNOPSIS (Total 10 marks)

Full marks shall be given for correct and complete answer, ie, the answer shall be complete with chemical structure and chemical equations. Otherwise marks shall be reduced proportionally.

(II) MAJOR EXPERIMENT (Total 40 marks)

Identification of an unknown organic compound by a systematic qualitative analysis. Full credit shall be given for correct and complete answer. The answer shall be complete like "*the given organic compound is a saturated aromatic alcohol*" OR "*the given organic compound is a saturated aliphatic diamide (Urea)*" etc.

Mark distribution:

Aliphatic/Aromatic	: 5
Saturated/Unsaturated	: 5
Detection of elements	: 10
Qualitative tests including confirmatory tests	: 20

Marks shall be reduced proportionally if all the qualitative and confirmatory tests are not performed fully.

(III) MINOR EXPERIMENT (Total 20 marks)

Preparation of an organic compound through a one step reaction. Full credit shall be given to the preparation if the compound prepared is of correct texture (Crystal shape), colour, odour, dryness and yield.

Mark distribution:

Colour	: 2
Odour	: 2
Dryness	: 2
Texture	: 4
Yield	: 10

Marks shall be reduced proportionally if any of the above criteria is not satisfactory.

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**PHARMACEUTICS –I**  
(Time : 4 hrs, Max Marks : 70)

1. **Synopsis** (10 marks)  
Principle, procedure, use, dose and label requirements of **ANY TWO** preparations.
  
2. **ONE** major preparation (25 marks)  
Any one emulsion
  
3. **ONE** minor preparation (20 marks)  
Include,
  - (a) Mixtures containing diffusible solids/ indiffusible solids/ precipitate forming liquids
  - (b) Biphasic Liniments/ lotions
  - (c) Ointments prepared by fusion method
  - (d) Powders with geometrical dilution
  
4. **ONE** minor preparation (15 marks)  
Include,
  - (a) Simple mixtures/ solutions
  - (b) Divided powders/ bulk /dusting powders
  - (c) Ointments prepared with trituration method

**SPLIT UP OF MARKS**

Sl. No		Major (25)	Minor (20)	Minor (15)
1.	Calculation of working formula of the prescription (from given formula)	5	5	5
2.	Evaluation of the product	10	10	5
3.	Container selection and label	5	3	3
4.	Performance of the experiment	5	2	2
	<b>TOTAL</b>	<b>25</b>	<b>20</b>	<b>15</b>

## HUMAN ANATOMY & PHYSIOLOGY

(Time : 4 hrs , Max Marks : 70)

### I. Synopsis

10 marks

- Two questions carrying 5 marks each
- includes principle / procedure of experiment

### II. Spotters

(2x10=20 marks)

- Include Bone/model/chart/instruments

### III .Experiment

Two minor experiments

(2x20=40 marks)

OR

One major experiment

40 marks

*Minor experiment include* : B.P, Hemoglobin estimation Bleeding time, clotting time, ESR, Blood grouping, Heart rate, pulse rate, Body temperature, Tidal Volume, Vital Capacity.

*Major Experiment include* : RBC Count, WBC Count, Differential Count.

#### Mark distribution for minor experiment

Conduct of experiment	-	10 marks
Result + Experiment Viva	-	10 marks

#### Mark Distribution for major experiment

Conduct of experiment	-	20 marks
Result + Experiment Viva	-	20 marks

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## PHARMACOGNOSY I

(Time : 4 hrs , Max Marks : 70)

### **I Synopsis 10 marks**

a. Chemical test/detection of adulterants of any two drugs from following:  
Honey, Agar, Tragacanth, Starch, Asafoetida, Benzoin, Myrrh, Acacia, Castor oil,  
Shark liver oil, Woolfat, Bees wax

**OR**

b. Various methods of extraction of volatile oils

### **II Taxonomy 20 marks**

#### Mark Distribution

Diagram	-	8 marks
Description	-	8 marks
Floral Formula	-	2 marks
Floral Diagram	-	2 marks.

### **III. Transverse section of any one crude drug mentioned in the syllabus 25 marks**

Diagram	-	5 marks
T.S	-	20 marks

### **IV Spotters 15 marks**

Identification  
Biological Source  
Chemical Constituents  
and uses of any five organized and unorganized drugs mentioned in the theory. (3x 5=15)

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