



Name :

Roll No. :

Invigilator's Signature :

**CS/M.Pharm/SEM-1/MPT-101(2)/2011-12
2011**

PHYTOPHARMACEUTICAL ANALYSIS

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :
10 × 1 = 10

i) Clove oil is used in the examination of

- a) oily powders b) solids
c) liquids d) none of these.

ii) Total ash consists of

- a) carbonates b) phosphates
c) silicates and silica d) all of these.

iii) Menstruum, Miscella, leaching are related to

- a) extraction b) TLC
c) HPLC d) mass spectroscopy.



- iv) Soxhletion is a process of
- a) hot continuous extraction
 - b) cold continuous extraction
 - c) warm continuous extraction
 - d) all of these.
- v) Spoilage is a substandard condition of crude drug produced by
- a) UV light
 - b) moisture
 - c) microbial infestation
 - d) all of these.
- vi) High throughput screening uses
- a) microtitre plates for assay
 - b) petridish for assay
 - c) conventional assay kit
 - d) all of these.
- vii) Chloral hydrate solution is used as
- a) clearing and bleaching agent
 - b) staining agent
 - c) colouring agent
 - d) none of these.
- viii) Phloroglucinol is chemically
- a) 1, 2 dinitro benzene
 - b) 2-hydroxy-3-nitro aniline
 - c) benzene-1, 3, 5-triol dehydrate
 - d) none of these.



- ix) Starch can be identified by
- a) lycopodium spore method
 - b) palisade ratio
 - c) stomatal index
 - d) none of these.
- x) Preparative TLC has a configuration
- a) 20 × 20 cm having a layer thickness of 2 mm
 - b) 20 × 25 cm having a layer thickness of 1 mm
 - c) 25 × 20 cm having a layer thickness of 2 mm
 - d) 25 × 25 cm having a layer thickness of 1 mm.
- xi) Vein islet and vein termination numbers are used as
- a) identification of leaf characters
 - b) identification of bark characters
 - c) identification of root characters
 - d) none of these.
- xii) Nitric acid is used for the separation of
- a) epidermis of leaves b) Ca-oxalate of leaves
 - c) starch of leaves d) all of these.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. Write a short note on adsorbents for quantitative thin layer chromatography.
3. Discuss the role of fluorescence analysis in quality control of crude drugs.



4. What do you mean by pre-extraction operations ? What are the factors affecting extraction of herbal drugs ? 2 + 3
5. Discuss in brief about the WHO guidelines for the quality control of raw materials.
6. Discuss in brief about the selection, collection and identification of plant materials.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. Define the terms extraction, maceration, digestion and remaceration. Discuss in detail about the general procedure for various types of extraction. What are the factors to be considered for selection of solvents in extraction ? 4 + 7 + 4
8. Define the term “adulteration”. Classify the types of adulteration of herbal drugs. What are the factors responsible for deterioration of herbal drugs ? What are the possible control measures for deterioration ? 2 + 3 + 7 + 3
9. Explain the term “ash values”. Classify various types of ash with suitable examples. Discuss various types of solvent extraction of crude drugs. 3 + 5 + 7
10. Discuss in detail about the method of the preparation of plant samples for antimicrobial screening. Enumerate the general methods for antimicrobial screening. 5 + 10
11. What are the parameters influencing separation in TLC ? Write notes about the solvent characteristics in TLC. Discuss in brief about the detection of herbal drugs and extracts by TLC. 5 + 4 + 6