



Name :

Roll No. :

Invigilator's Signature :

CS / M.Pharm / SEM-2 / MPT-213 / 2013

2013

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 :

$10 \times 1 = 10$

- i) Supercritical fluid chromatography is a hybrid of
 - a) Gas and liquid chromatography
 - b) Gas chromatography and mass spectroscopy
 - c) Liquid chromatography and NMR spectroscopy
 - d) None of these.
- ii) Ash value and Extractive value are the
 - a) Botanical parameter
 - b) Physicochemical parameter
 - c) Pharmacological parameter
 - d) Toxicological parameter.



- iii) Wagner reagent is used for the detection of
- a) Glycoside
 - b) Alkaloid
 - c) Tannin
 - d) Steroid.
- iv) Lycopodium spore method is an analytical technique used for
- a) Powder drug
 - b) Organized drug
 - c) Unorganized drug
 - d) All of these.
- v) In high throughput screening method, extracts are separated by
- a) Automated flash chromatography
 - b) Paper chromatography
 - c) Gel chromatography
 - d) Thin layer chromatography.
- vi) Drug adulteration involves
- a) Deterioration
 - b) Sophistication
 - c) Substitution
 - d) All of these.
- vii) Which is the cold extraction process from the following ?
- a) Infusion
 - b) Decoction
 - c) Digestion
 - d) Maceration.
- viii) Collapsed cell trichomes are present in
- a) Datura
 - b) Digitalis
 - c) Opium
 - d) Tea.
- ix) Stomata is a
- a) Glandular outgrowth
 - b) Minute opening
 - c) Tissue exudates
 - d) none of these.



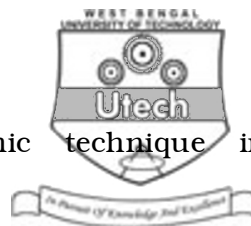
- x) Stomatal index is
- Constant for a given species
 - Do not vary with age
 - Applied for both entire and power drug
 - All of these.
- xi) Extraction by sonication involves the use of
- Ultrasound
 - Electric charge
 - Magnetic energy
 - None of these.
- xii) Moisture content of a volatile active constituent is determined by
- Gas chromatography
 - Toluene distillation method
 - IR spectroscopy
 - NMR spectroscopy.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

- Write a note on various types of extraction procedure involving the extraction of crude drugs.
- Write in brief the steps of high throughput screening.
- What are the chemical tests used for the determination of alkaloid and glycosides.
- Describe different tests to be performed in (i) Arachis oil, (ii) Gum Acacia, as per official pharmacopoeia.



6. Enumerate the role of chromatographic technique in evaluation of herbal drug.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Discuss various techniques for the quality control of crude drugs.
 8. What do you mean by qualitative and quantitative microscopic evaluation.
 9. Describe different methods to evaluate antimicrobial activity of phytochemicals.
 10. What do you mean by proximate analysis in phyto-pharmaceuticals ? Describe the procedure for the determination of (i) Ash value, (ii) Extractive value, (iii) Crude fibre content.
 11. Discuss various stability parameters for herbal formulations. State in brief the applications of quality control to herbal drugs.
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