



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF **MEDICAL SCIENCES**

DIPLOMA IN PHARMACEUTICAL TECHNOLOGY

(DPT)

Done on 31/10/2013

APM 2205: PHARMACOGNOSY I

SPECIAL/SUPPLEMENTARY: EXAMINATIONS

SERIES: OCTOBER 2013

TIME: 2 HOURS

INSTRUCTIONS:

You should have the following for this examination

- *Answer booklet*

This paper consists of **THREE sections A, B and C.**

Answer all questions in section **A** and **B** and choose **THREE** out of **FIVE** questions in section **C.**

*This paper consists of **10 PRINTED** pages*
SECTION A (40MARKS)

1. Which of the following is not a source of drugs?
 - a) Plants
 - b) Atmospheric air
 - c) Minerals
 - d) Sea creatures

2. Choose the drug that is odd in respect to morphological classification
 - a) Gum
 - b) Fruits
 - c) Stem
 - d) Roots

3. Which of the following is not a physical method of evaluating crude drugs
 - a) Phytochemical screening
 - b) Spectroscopic analysis
 - c) Boiling point
 - d) Chromatography

4. A solvent used for extraction is called:
 - a) Menstruum
 - b) Marc
 - c) Galenical
 - d) Vehicle

5. The term “organileptic evaluation” refers to:
 - a) Evaluation of organic matter present in crude drugs
 - b) Evaluation with the help of sensory organs
 - c) Evaluation based on chemical reagents and the reactions to them
 - d) Evaluation based on organic reactions

6. The following are methods of isolating active compounds EXCEPT
 - a) Crystallization
 - b) Soxhlation
 - c) Column chromatography
 - d) Preparative thin layer chromatography.

7. Cultivation of crude drugs has the following advantages EXCEPT:
 - a) High quality and purity
 - b) Regular supply
 - c) Low costs in mechanization
 - d) Use of modern technology

8. Which one of the following is Not a drug extraction methods?
 - a) Decoction
 - b) Chromatography
 - c) Effleurage

- d) Rendering
9. In dry distillation
- The solvent used is water and alcohol
 - There is no solvent used
 - The solvent used is water only
 - The solvent used is an alcohol
10. The following is not true about merits of sexual method of cultivation of drugs
- Seedling are comparatively cheaper and easy to get
 - Seedlings are long-lived (e.g.) Perennial drugs
 - They require more time to bear compared to asexual method
 - Suitable where other vegetative methods cannot be utilized
11. The following are types of arrangements of leaves on the stem EXCEPT
- Opposite
 - Alternate
 - Whorled
 - Serrate
12. A pubescent leaf is a leaf described to have:
- A smooth surface with no hairs
 - Hairs on its surface
 - Large stomata on both sides
 - A smooth edge or margin
13. Korean ginseng, (*Panax ginseng*) is a popular herbal product used in our country. It's obtained from which part of the plant?
- The bark
 - Rhizome
 - Leaf
 - Seeds
14. In taxonomical classification of medicinal plants, which of the following groups is NOT used?
- Family
 - Plant part
 - Genus
 - Species
15. Effleurage technique is a suitable method in extraction of :
- Alkaloids
 - Perfumery oils
 - Glycosides
 - Carbohydrates
16. The following are examples of tinctures in pharmacy except
- Tincture of Benzoin
 - Tincture of iodine
 - Tincture of opium

- d) Tincture of starch
17. The following are advantages of using alcohol as a solvent during extraction of crude drugs EXCEPT
- Flammable
 - Extraction can be done at low heat
 - Rapid absorption
 - Resists moulds and bacteria growth
18. The following drugs are obtained from leaves except
- Senna
 - Digitalis
 - Encalyptus
 - Opium
19. The following are artificial methods of drying natural products EXCEPT
- Shade drying
 - Freeze drying
 - Tray drying
 - Vacuum drying
20. Which of the following books is NOT considered as a standard reference for crude drugs?
- British Herbal Pharmacopoeia
 - Indian Herbal Pharmacopoeia
 - British Herbal Codex
 - British National Formulary

SECTION B (Answer ALL questions)

- Define the following terms:
 - Pharmacognosy **(2marks)**
 - Crude drug **(2marks)**
- List FOUR ways in which leaves are arranged on the stem. **(4marks)**
- List FOUR important roles played by compounds from natural sources in modern medicine **(4marks)**
- List FOUR sources of crude drugs **(4marks)**
- State FOUR disadvantages of wild plant collection as source of raw materials in pharmacy **(4marks)**

6. List any FOUR environmental or exogenous factors that causes variation in natural products (herbs). **(4marks)**
7. Define the term garbling as used in pharmacognosy and explain why it's done **(4marks)**
8. Give FOUR disadvantages of using water as a solvent during extraction of crude drugs in pharmacognosy. **(4marks)**
9. Briefly describe how you may evaluate an orange fruit organoleptically **(4marks)**
10. (a) Differentiate between marc and menstruum **(2marks)**
(b) Define the term adulteration and 2 ways it may occur **(2marks)**

SECTION C Answer any THREE questions

1. a) Describe the various ways / methods in which medicinal plants are classified **(10marks)**
b) Discuss the various reasons for drying crude drugs. **(6marks)**
c) List any FOUR types of dryers used in pharmacognosy and explain briefly how they work.
(4marks)
2. Discuss the various methods employed in
a) Evaluation of crude drugs . **(10marks)**
b) Explain the different types of adulterants that may be encountered in neutral products
(10marks)