



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR

PHARMACY

PPD 320: PHARMACOGNOSY II

DATE: Monday 2nd April, 2012

TIME: 8.00 a.m. – 11.00 a.m.

Instructions:

- Answer all questions
- Each section must be answered in a separate answer booklet.

SECTION A

1. Describe the difference between Waxes and Fats. (3 MARKS)
2. Describe the method of preparing Yellow Beeswax from honeycomb. (3 MARKS)
3. Define the following:
 - i. Oleoresin (1 MARK)
 - ii. Gum Resin (1 MARK)
4. State the biological source and two (2) pharmaceutical uses for each of the following fixed oils:
 - i. Castor oil (3 MARKS)
 - ii. Theobroma oil (3 MARKS)
5. Give the biological source and two (2) commercial uses of the following Resins:
 - i. Colophony (3 MARKS)
 - ii. Myrrh (3 MARKS)
6. Explain the difference between Fixed Oils and Fats using glycerol and appropriate structures of fatty acids. (10 MARKS)
7. Discuss the methods used in extraction of Volatile Oils from plant material. (10 MARKS)

SECTION B

1. Regarding saponin glycosides:
 - a. State three of their physicochemical properties (3 marks)
 - b. Give two plant sources (3 marks)
2. Give any four glycosides and a disease where each can be used (4 marks)
3. Give any three plants that contain anthracene glycosides used as cathartics (3 marks)
4. Explain why some coumarins are termed phytoalexins (3 marks)
5. State any three commercial uses of flavonoids (3 marks)
6. State any cyanogenic glycosides and their amino acid sources (3 marks)
7. Give three basic structural features of the aglycone of a cardiac glycoside (3 marks)
8. State three tests for glycosides (3 marks)
9. By use of examples, classify glycosides based on the link between the glycon and aglycon part (12 marks)

SECTION C

1. By use of examples, differentiate between true alkaloids and proto alkaloids
(4 marks)
2. Identify any six physicochemical properties of alkaloids that are useful for their therapeutic action
(6 marks)
3. State any two examples of poisonous alkaloids and their plant sources
(2 marks)
4. Identify any three reagents that produce colour precipitates with alkaloids. State the specific colour of precipitate for each reagent.
(3 marks)
5. Briefly comment on the uses of nicotine
(3 marks)
6. Give the Pharmacological uses of any three tropane alkaloids
(3 marks)
7. Identify the name of the main coca alkaloid and the species and family of its plant source
(3 marks)
8. State any three Pharmacological properties of quinine that make an ideal antimalarial agent
(3 marks)
9. Explain why tubocurarine is used in the diagnosis of myasthenia gravis
(3 marks)
10. Discuss alkaloids as a source of modern pharmacological agents and include relevant examples
(10 marks)