
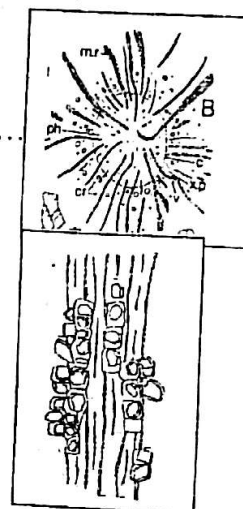
	TANTA UNIVERSITY FACULTY OF PHARMACY DEPARTMENT OF PHARMACOGNOSY					
	FINAL EXAMINATION FOR SECOND YEAR STUDENTS					
	COURSE TITLE:	Pharmacognosy 2		COURSE CODE: PG303		
DATE:	23/1/2017	TERM: FIRST	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 120 MINTUES		

Question 1 Rhizome (10 marks)
Complete the following sentences and insert your answer in the answer sheet:

- This picture is ...(1)...., The arrngment of it differentiat between ...(2)...and ...(3)...species
- Long storage of filix mas lead to ...(4).... So is used within ... (5) ... after collection, and ... (6) Is the key elements of it, It contains .. (7) ... as active constituent, so is not taken with castor oil because (8) ...
- This is the key element of rhizome contain ... (9) as active Constituent which gives with 66% ... (10) color
- ... (11) ... is used In the treatment of rheumatoid arthritis, and contraindicated in patient suffer from ... (12) ... and ... (13) ...
- Ginger is used for ... (14) ... and ... (15)
- *Podophyllum peltatum*, differ from *Podophyllum hexandrum* by ... (16) and ...(17) ... both are used as ... (18) and ...(19) ...
- Alc. Extract+ few drops of 5% copper acetate soln. gives bright green Color this test is specific for ... (20) ...



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Part II (seed & fruit): (28 point at 60 minutes)

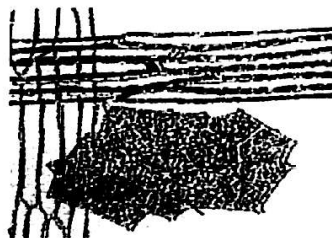
Q.1

You are provided with 42 items (28 sentences and 14 figures), describing different medicinal plants. Please match ONLY two sentences and one figure for each plant mentioned at the underling Table, regarding that the repeated answers will be neglected. (21 point at 50 minutes)

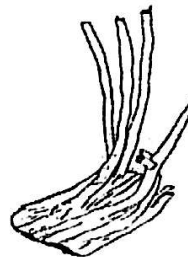
- 1) Fruit is related to Family Cucurbitaceae.
- 2) Amphitropous seeds.
- 3) The seed is used as nutritive and lactagogue.
- 4) Part used of seed is the dried ripe limed kernel.
- 5) The **FRUIT** is a member of family Solanaceae.
- 6) The seed active constituent reacts with (80%) H_2SO_4 giving green color.
- 7) T.S. diagram of the Fruit showed hair-like secreting cells of the endocarp.
- 8) Seed contains active constituent strychnine and brucine.
- 9) Seed related to Family linaceae.
- 10) The seed is a member of family Zingiberaceae.
- 11) The fruit is used as Irritant and powerful purgative.
- 12) Fruit is related to Family Umbelliferae.
- 13) The **FRUIT** is externally used as counter irritant and stimulant.
- 14) The fruit contain piperine alkaloids.
- 15) Linamarin reacts with Guignard's paper giving orange color.
- 16) The seed has **arilod** out-growth.
- 17) The fruit is used as source of vanillin, flavoring agent and perfumery.
- 18) Porous type capsule.
- 19) The fruit is used as condiment and antipyretic.
- 20) L. cut diagram of the **SEED** showed coiled type embryo.
- 21) Powder of the Fruit contains fragments of shaggy hair.
- 22) Opium latex which mainly, contains codeine, papaverine, morphine.
- 23) Seed contains K-strophanthin Cardiac glycosides.
- 24) Orthoplocally embryo.
- 25) The seed has **arillas** out-growths.
- 26) The seed is related to family Leguminosae.
- 27) The **SEED** is used as anticholinergic and mydriatic.
- 28) Seed contains active constituent sinalbin.



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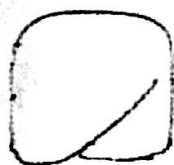
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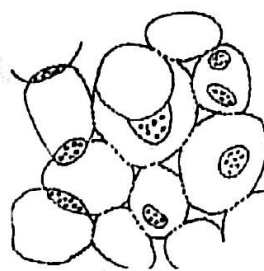
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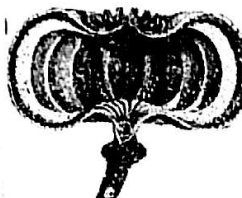
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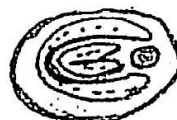
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Table

Plant	Sentence No.		Figure No.	Plant	Sentence No.		Figure No.
Linseed				Stramonium			
Cardamom				Cumin			
Strophanthus				Capsicum			
Nux Vomica				Colocynth			
White Mustard				Vanilla			
Nutmeg				Black pepper			
Foenugreek				Poppy			

Q.2

Give rezone

(7 point at 10 minutes)

1. Cubebs fruit is named stalked pepper.
.....
.....
2. Vanilla fruits must be cured before use.
.....
.....
.....
3. Regarding to the endocarpal tissue, both wheat grain and fennel can be differentiated.
.....
.....
.....
4. Linseed is used as cattle food.
.....
.....
5. Bitter almond seed is used as sedative.
.....
.....
6. Black mustard enzymatic hydrolysis gives volatile compound.
.....
.....
7. Colchicum seed reacts with HCl giving yellow color.
.....
.....

Part III Roots & unorganized drugs

(24 x 0.5 = 12 marks, 35 minutes)

Select only one answer from the following questions and mark all the answers in the Answer Table.

- 1- Regarding catechu extract all the following is false except:
 - a- It is used in tanning & dying
 - b- It is the heartwood of *Acacia* species
 - c- It is a type of dried juices
 - d- It is used as purgative
 - e- Opium latex contains this extract
- 2- Aconite roots are used externally because:
 - a- The leaves blades are poisonous when used internally
 - b- The drug causes bradycardia in small dose & cardiac arrest in higher dose when used internally
 - c- It contains protoveratrine which has cytotoxic effect
 - d- None of the above
 - e- Both b & c
- 3- Vera cruz jalap & Orizaba jalap are species of:
 - a- Genus *Ipomoea* family Convolvulaceae
 - b- Genus *Jateorhiza* family Menispermaceae
 - c- Genus *Aconitum* family Ranunculaceae
 - d- Genus *Rauwolfia* Family Apocynaceae
 - e- Genus *Ipomoea* family Rubiaceae
- 4- The following drug is used as purgative:
 - a- Jalap resin
 - b- Aloe dried juice
 - c- Both a & b
 - d- Aconite roots
 - e- Both b & d
- 5- Which of the following is used as expectorant:
 - a- *Gentiana lutea*
 - b- *Cephaelis ipecacuanha*
 - c- *Polygala senega*
 - d- Both b & c
 - e- Both a & c
- 6- Which of the following is a triterpene saponin glycoside:
 - a- Senegin & polygallic acid
 - b- Senegenin
 - c- Columbamine
 - d- Both a & b
 - e- Both a & c

- 7- All of the following is true except:
- a- Methyl salicylate odor is characteristic for senega roots powder
 - b- Fermentation of gentian roots cause the distinctive odor of these roots
 - c- Aconite roots powder cause numbness when chewed
 - d- Dandelion tea could be used as appetizer
 - e- Calumba roots have a tertiary cambium
- 8- Substitute fibers and tracheidal vessels are present in the powder of:
- a- *Aconitum napellus*
 - b- *Cephaelis ipecacuanha*
 - c- *Polygala senega*
 - d- *Panax ginseng*
 - e- Both a & c
- 9- The following drugs are used as hypotensive:
- a- Veratrum roots & rhizomes.
 - b- Rauwolfia roots & rhizomes
 - c- Marshmallow roots
 - d- Both b & c
 - e- Both a & b
- 10- The following is true except:
- a- Opium latex & Rauwolfia roots could be used as hypnotic due to alkaloids
 - b- Gum arabic & Senega roots contain tannins so they have astringent effect
 - c- Ipecacuanha roots contains idioblasts of acicular crystals of calcium oxalate
 - d- We use purgative as jalap resin after santonin to expel thread worms
 - e- Ginseng is used to boost the immune system in chronic fatigue syndrome
- 11- The following causes depression to CNS:
- a- Opium latex
 - b- Rauwolfia roots
 - c- Veratrum roots
 - d- All of the above
 - e- Both b & c
- 12- All the following is true except:
- a- Marshmallow plant belongs to family Malvaceae
 - b- Veratrum and aconite roots are highly toxic
 - c- Reserpine alkaloid is found in veratrum roots
 - d- Alkaloids are the major constituents in veratrum and aconite roots
 - e- Panaxans are high molecular weight polysaccharides
- 13- Which of the following about senega roots is true:
- a- Contain senegin, polygalitol and methyl salicylate
 - b- It is used in chronic bronchitis
 - c- Senegin glycoside is hydrolyzed to senegenin and glucose
 - d- Starch & calcium oxalate are absent from its powder
 - e- All of the above

14- Gentian & Calumba roots:

- a- Contain triterpene saponins so they are used as bitter stomachic
- b- Contain gentiopicroin and columbin which have bitter stomachic & tonic effects
- c- Contain alkaloids so they are used as emetic drugs
- d- Contain bitter principles so they have bitter taste
- e- Both b & d

15- The following about aldobionic acid is true except:

- a- Is a constituent of arabic acid in gum arabic
- b- Is composed of glucouronic acid and galactose
- c- Gum arabic also contains oxidase enzyme
- d- Is composed of tragacanthin & bassorin
- e- Is acidic to litmus paper

16- All of the following is true except:

- a- Gum tragacanth with benzidine & H_2O_2 gives blue color
- b- Gum tragacanth swells in water to form gelatinous mass
- c- Gum arabic is completely dissolve in water to form a viscous liquid
- d- Gum tragacanth gives blue color with I_2 solution
- e- Gums are used as suspending agents

17- Which of the following is false:

- a- Gelatin is used in glycerin suppositories & for bacterial growth media
- b- Agar-agar is used as laxative
- c- Solution of gelatin gives yellow precipitate with picric acid
- d- Agar-agar is obtained from boiling *Gelidium* species in pure alcohol
- e- Catechutannic acid is the main constituent of catechu extract

18- Aloetic juice is found in:

- a- Epidermal cells in *Aloe ferox* leaves
- b- All types of cells in *Aloe ferox*
- c- Xylem vessels of *Aloe ferox* leaves
- d- Mucilaginous cells in *Aloe* species leaves
- e- Pericyclic cells in *Aloe babrbadensis* leaves

19- Which of the following is false about Meconic acid:

- a- It is identified in opium latex by the stable color produced with solution of $FeCl_3$
- b- It is combined with alkaloids of opium latex
- c- It is found in the full grown and ripe fruits of *Papaver somniferum*
- d- A key marker for the presence of opium alkaloids
- e- None of the above

20- Which of the following is found normally in plants:

- a- Mucilage
- b- Aloetic juice
- c- Gum arabic
- d- Both a & b
- e- Both b & c

- 21- Which of the following about Aloe dried juice is false:
- a- Vitreous type contains barbaloin crystals
 - b- Hepatic type is opaque & dull masses
 - c- Contain anthraquinone glycosides
 - d- Is obtained by drying the juice obtained from the incised leaf base
 - e- Contains resinotannols combined with cinnamic acid
- 22- These drugs have emetic effect:
- a- Protoveratrine & cephaeline
 - b- Reserpine and columbamine
 - c- Senegin and gentiopictin
 - d- Taraxacin & chlorogenic acid
 - e- All of the above
- 23- All of the following drugs contains alkaloids except:
- a- Veratrum & Ipecacuanha
 - b- Senega & Aloe
 - c- Opium latex & Rauwolfia
 - d- Dandelion & Rauwolfia
 - e- Opium latex & Senega
- 24- Rootstalks of *Polygala senega*:
- a- Contain pith in the middle of the transverse section
 - b- Senega drug should not contain these rootstalks
 - c- Contain unicellular & blunt trichome
 - d- Both a & c
 - e- All of the above

The Answer Table

NO.	a	b	c	d	e	NO.	a	b	c	d	e
1						13					
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Good Luck