	TANTA UNIVERSITY FACULTY OF PHARMACY DEPARTMENT OF PHARMACOGNOSY			
	EXAMINATION FOR FIRST YEAR STUDENTS COURSE TITLE: Botany and Medicinal Plant			COURSE CODE: PG101
	DATE: 1/1/2015	TERM: FIRST TERM	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2 HOURS

All questions should be attempted

Question No. (I)

(10 points)

A- Choose the correct statements which confirm the characters of the following plant Families

B- Mention only one drug related to each. Put your answers in the following Table

Answer Table

Item	statements	Drug
1-Poaceae		
2-Fabaceae		
3-Papaverceae		
4-Liliaceae		
5-Cannabenaceae		

Statements:

- | | |
|--|---|
| a-Has aromatic herbs | b- Its fruit in the form of leg ^u me |
| c- Has Graminaceous stomata | d- Free from calcium oxalate |
| e- Has raphides of calcium oxalate | f- Has no hairs |
| g- Has paracytic stomata | h- Mainly containing alkaloids |
| i-Has glandular & non glandular trichoms | |

j- Has starch in its fruits

k-Its fruit in the form of porous capsule

l- Has calcium oxalate in the form of prisms

m-Its underground organs usually contain starch

n-Its fruits in the form of grains

o-The part used is the female plant

Question No.(II) :

(10 points)

Identify the following elements (a) then mention the different types or forms for each (b)

A-



a-

b- Forms are :

1-

2- i-

ii-

iii-

3-

4-

5-

-3-

B-



a-

b- Types are

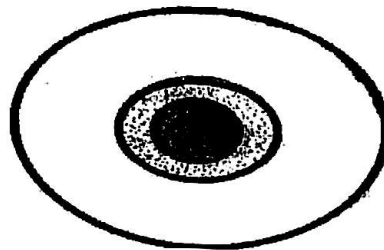
1-

2-

3-

4

C-



a-

b- Types are

i - i-

ii-

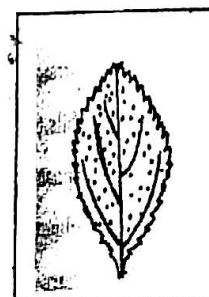
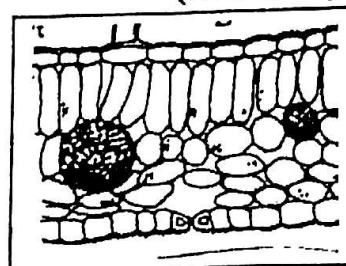
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Question II..... (30 marks)

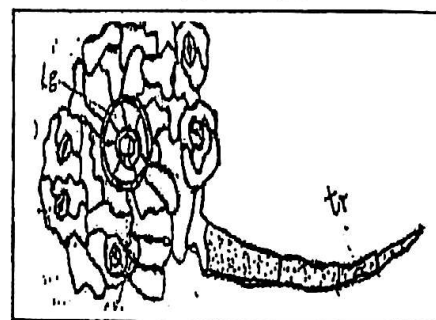
A-Choose only one answer which you consider correct and record your choice in the corresponding place in the answer sheet provided below.

(15 marks)

- 1- Regarding to this picture all of them are true except;
 - a- Is the key element of plant called deadly night shade
 - b- Use in treatment of Parkinsonism
 - c- Its toxicity cause yellow vision
 - d- Its toxicity is treated by jaborandi leaves
 - e- Give positive Vitali 's test
- 2- Leaf used as hepatoprotective
 - a- Rosemary
 - b- Boldo
 - c- Gauafa
 - d- All of the above
 - e- Both (a) and (b)
- 3- Regarding to this picture all of these are true except;
 - a- Leaf related to F. Rutaceae
 - b- Rigid and brittle when dry, Cartilagenous when moist
 - c- Contain luteolin and diosmin in the epidermal layer
 - d- Used in the treatment of the peripheral vascular disorder
 - e- With KOH → red color
- 4- Regarding to diosphenol
 - a- Is vol. oil present in peppermint leaves
 - b- Is used in treatment of varicose veins
 - c- Has diuretic and antiseptic effect
 - d- Present as sphaerocrystal in epidermal layer
 - e- Both (c) and (d)
- 5- Anomocytic stomata is present in
 - a- Buchu
 - b- Digitalis
 - c- Squill
 - d- All of the above
 - e- Both (a) and (b)

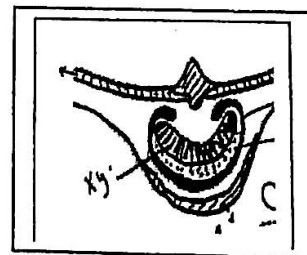
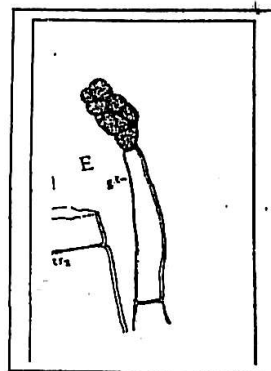


- 6- Regarding to this picture all of these are true except
 - a- Is the key element of mentha
 - b- Contain paracytic stomata
 - c- This hair may be present in stramonium leaf
 - d- Its constituent with vanillin sulphuric acid reagent → orange yellow color,
 - e- Present in leaf used as anti spasmodic



- 7- Drug used to increase gastric and pancreatic secretion
 - a- Mentha
 - b- Jaborandi
 - c- Rosemary
 - d- Coca
 - e- None of the above
- 8- Leaves contain epidermal alkaloid are
 - a- Coca
 - b- Belladonna
 - c- Boldo
 - d- Both (a) and (b)
 - e- All of the above
- 9- Regarding to boldo leaf all of these are true except;
 - a- Related to F. Rutaceae
 - b- Give positive Mayer's test
 - c- Contain Glycoside
 - d- increase bile secretion
 - e- Contain vol. oil

- 10- Leaves used as sedative
 a- Belladonna
 d- Coca
 b- Cherry laurel
 e- Both (a) and (b)
 c- Guafa
- 11- All of these leaves are used as diuretics except
 a- Tea due to the presence of Theophylline
 c- Uva ursi
 d- Buchu
 b- Boldo
 e- Squill as secondary effect
- 12- Regarding to black tea
 a- Is called cured tea
 b- contain theaflavins which gives the color of the tea
 c- The leaves are heated to inactivate the enzymes.
 d- Is used to decrease the body weight
 e- Both (a) and (b)
- 13- Henna leaves is used as anti-dandruff due to
 a- the presence of Lawson
 b- Antiseptic effect due to phenolic glycoside
 c- The presence of flavonoids
 d- Both (b) and (c)
 e- all of the above
- 14- This is the key elements of
 a- Digitalis
 b- Hyoscyamus muticus
 c- Leaf has smooth muscle relaxant effect
 d- Leaf has the highest amount of active constituents
 e- Both (c) and (d)
- 15- Mucilage
 a- Give red color with ruthenium red
 b- Present in Buchu
 c- Present in epidermal cells of senna
 d- Both (a) and (c)
 e- All of the above
- 16- Regarding to this picture all of these are true except
 a- the T.S. of jaborandi leaf
 b- For leaf related F. Erythroxylaceae
 c- Its leaf is used as stimulant and tonic
 d- The cortical tissue is formed of parenchyma and collenchymas
 e- Give positive result with Mayer's reagent
- 17- Regarding to lanatosides B:
 a- Is the acetyl product of purpuria glycoside B
 b- On partial hydrolysis gives secondary glycosides digitoxin , gitoxin and digoxin.
 c- Give positive Kedde's test which is specific for aglycone only
 d- Its structure contain OH grope in position 14, 16
 e- Both (a) and (d)



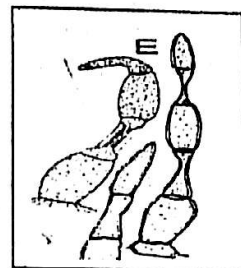
18- Regarding to these pictures



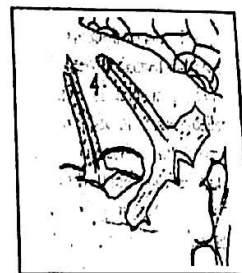
1



2



3



4

- a- Picture 1 and 2 is present in all family solanaceae
b- Picture 1 present in leaf has isobilateral palisade
c- Plant has the hair No. 1 contain anisocytic stomata
d- Both (b) and (c)
e- All of the above

19- Regarding to the above pictures

- a- Picture 3 is called digitalis hair
b- The leaf which has the hair No. 3 not used as crude powder
c- Picture No. 4 is senna hair
d- All of the above
e- Both (a) and (b)

20- Residue of drug + conc. HNO_3 and evaporate then add alc. KOH this test is

- a- Kedde's test
b- Vittal's test
c- Specific for cardiac glycosides
d- General test for alkaloids
e- Both (b) and (d)

Answer Sheet:

No.	A	B	C	D	E	No.	A	B	C	D	E
1						11					
2						12					
3						13					
4						14					
5						15					
6						16					
7						17					
8						18					
9						19					
10						20					

**B- Write the letter (T) to the correct answer, and the letter (F) to the false one
Correct the false one by put line under the false words and write the correct
answer in the specific place
(7.5 marks)**

No.	The statements	correct words	Letter
1	In <u>hypogeal</u> germination cotyledon leaf is the first leaf appears on the stem		
2	Spines in the branches of orange tree is considered as Prophyls leaves		
3	A whorl of bracts surrounding a group of flowers is called spathe		
4	In family Graminae glume is called (sterile bract)		
5	anthocyanins is formed in the leaves due to decrease of light and temperature		
6	ligules are outgrowth or extensions of long Sheath		
7	The length of the petioles is constant in the same plant		
8	dicot. and monocot. leaves may be simple, loped, or compound		
9	Multicastate venation with vein oriented in all direction is called convergent		
10	When the surface of the leaf is covered with short stiff hairs is called villose.		

C- Discus why

(7.5 marks)

- 1- Coloscopy is used for diagnosis of senna poisoning
- 2- Anthraquinones glycoside not taken with cardiac glycosides
- 3- Liebermann's test give positive result with all cardiac glycosides and aglycones
- 4- Anthraquinones is taken as glycoside (inactive form) not as aglycone which is the active form
- 5- Green tea can be taken after meal while black tea not favorable after meal
- 6- Keller kiliani's test gives positive result with digoxin
- 7- Uva Ursi with conc. $\text{HNO}_3 \rightarrow$ red or orange
- 8 - Uva Ursi not taken during pregnancy
- 9- Winter green is used for the treatment of rheumatic disease
- 10- Catharanthus leaves are used as anticancer

The examiners are; Dr. Suzan Ibrahim