

KATHMANDU UNIVERSITY  
End Semester Examination  
August/September, 2017

Mark Scored:

Level : B. Pharm.

Year : II

Course : PHAR 214

Semester: II

Exam Roll No. :

Time: 30 min

F. M. : 20

Registration No.:

Date :

SECTION "A"  
[15Q × 1 = 15 marks]

Tick (✓) the most appropriate answer.

- Find the combination of miscible solvents  
a. Water-Propionol  
b. Hexane-Acetic acid  
c. Methanol-Cyclohexane  
d. Ether-Water
- Best method for the extraction of clove oil is  
a. Reflux method  
b. Micro-wave extraction method  
c. Soxhlet method  
d. Clavengers method
- Which group of the following consists of the only laxative glycosides?  
a. Capsaicin, Sennoside A, Rhein  
b. Vanillin, Sennoside B, Scopolamine  
c. Aloin, Sennoside B, Aloenin A  
d. Morphine, Kaempferol, Aloe-emodin
- Sunken stomata is significant character of  
a. Senna leaf  
b. Catechu bark  
c. Vanilla pod  
d. Aloe leaf
- Vanillin content of vanilla pod is ranged  
a. 2 - 2.75 %  
b. 2 - 3.25 %  
c. 2 - 4.75 %  
d. 4 - 6.50 %
- Dianthrone type of glycoside is  
a. Aloin A  
b. Rhein B  
c. Vanillin  
d. Sennoside D
- Medicinal plant of solanaceae family  
a. *Rheum emodi*  
b. *Vanilla planifolia*  
c. *Capsicum annuum*  
d. *Acacia catechu*
- Male fern oleoresin is used medicinally used as  
a. Anti itching  
b. Anti diarrheal  
c. Wound healing  
d. Anthelmintic
- Richest source of Quercetin, Rutin, and Hesperidin phenolics among following is  
a. Buckwheat  
b. Catechu  
c. Aloe  
d. Insect gall
- Choose an appropriate biosynthetic mechanism of plant metabolites  
a. Mevalonate pathway biosynthesizes the steroids  
b. Shikimate pathway biosynthesizes the fatty acids only  
c. Acetate pathway is derived by the tryptophan, and phenyl alanine  
d. Glycolysis never contributes for the biosynthesis of shikimic acid

11. Choose a group with anthraquinone glycoside and triterpenoidal glycoside respectively.
- a. Solasodine and Scellarin A  
 b. Rutin and Aloe emodin  
 c. Digitoxin and Glucovanillin  
 d. Sennoside A and Glycyrrhizin
12. Ca/K salt of glycyrrhizinic acid is 50 times more sweeter than sugar and is known as \_\_\_\_\_
13. Two drug molecules has been synthesized from Podophylotoxin are \_\_\_\_\_
14. Methadone is a synthetic drug from \_\_\_\_\_ and is used in \_\_\_\_\_
15. Structure of lobeline is biosynthesized from amino acid \_\_\_\_\_
16. Match the following:

[5Q × 1 = 5]

Atropine	Cytotoxic
Ergot	Cardiac arrhythmia
Ellaterin A	Mydratic
Withaferin A	Oxytocic
Ajmaline	Adoptogenic

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F. M. : 55

SECTION "B"

[ 5Q. × 3 = 15 marks]

Attempt *ANY FIVE* questions.

1. Write down the hallucinogens agents from fungus.
2. Mention the biological source of rauwolfia and ipecac in detailed.
3. Write down the medicinal value of Liquorice.
4. Draw a flow chart for Killer-Killani test for cardiac glycosides.
5. Mention toxic agents from plant sources.
6. Compare and contrast between plant primary and secondary metabolites.
7. Sketch out the anatomical diagram of *Aloe vera* leaf.

SECTION "C"

[ 5Q. × 5 = 25 marks]

Attempt *ANY FIVE* questions.

8. Discuss chemistry of Papaver alkaloid with relation to the development of modern medicine.
9. Give the detailed classification of glycosid.
10. Write down the chemistry and medicinal properties of steroidal herbal drugs.
11. Compare and contrast the uses and chemical constituents of withania and coca.
12. Describe the source and chemical compounds present in laxative herbal drugs.
13. Outline the biosynthesis of plant alkaloids.
14. Write short notes on
  - a. Fagopyrum
  - b. Insect gall

SECTION "D"

[ 2Q. × 7.5 = 15 marks]

Attempt *ANY TWO* questions.

15. Explain the chemical classification of alkaloids with suitable example. Highlight the tropane type of alkaloids from plants.
16. Elaborate the therapeutic property, mechanism of action with relevant to chemical constituents of vinca and taxus.
17. Outline the extraction, isolation, purification and characterization process of bioactive constituents from alcoholic extract of medicinal plant.

