

KATHMANDU UNIVERSITY
End Semester Examination [C]
May/June, 2019

Marks Scored:

Level : B. Pharm.
Year : II

Course : PHAR 204
Semester: I

Exam Roll No.:

Time: 30 mins.

F. M. : 20

Registration No.:

Date 31. MAY 2019

SECTION "A"

[15Q. × 1 = 15 marks]

Choose the most appropriate answer among the given options and **encircle** the letter of your choice.

1. Disease conditions that treated by employing completely drug less therapy
 - a. Regimental therapy
 - b. Amchi system
 - c. Massage
 - d. Moxibustion therapy
2. 'Synopsis Methodica Stirpium Britannicarum', 'Systema Naturae', and 'Analecta Pharmacognostica' works were published during
 - a. 15th-18th Century
 - b. 17th-18th Century
 - c. 17th Century
 - d. 17th-19th Century
3. Medicinal plant species prioritized by government of Nepal for the economic development is
 - a. *Zanthoxylum armatum*
 - b. *Digitalis purpurea*
 - c. *Camellia sinensis*
 - d. *Aloe vera*
4. Key character of transverse section of dicot leaf is
 - a. Mesophyll is differentiated into palisade and spongy parenchyma
 - b. Bundle sheath extension is made up of sclerenchyma
 - c. Oil glands, trichomes and Calcium oxalate crystals are absent
 - d. Typically iso-bilateral
5. Floral part of the medicinal plant used in healing
 - a. Cordyceps and Ergot
 - b. Clove and Corcus
 - c. Cinnamon and Aloe
 - d. Rose and Mentha
6. Select an annual type of herbs those contains essential oil
 - a. Clove, Mentha
 - b. Camphor, Pinus
 - c. Eucalyptus, Calamus
 - d. Fennel, Ginger
7. Significant anatomical character of fennel fruit is
 - a. Five vascular bundles and Six vittae
 - b. Six vascular bundles and Five vittae
 - c. cellulosic parenchyma around vascular bundles
 - d. cluster crystals of calcaum oxalate
8. Application of cytokinins in medicinal plant cultivation improves
 - a. Alkaloid yield in hyoscyamus.
 - b. *alpha*-Amylase production in germinating grains
 - c. Anthraquinone production in *Morinda citrifolia*
 - d. Menthol production up to 9% in Mentha

9. The highest value of 'vein islet number' is detected among these plants is
 a. *Erythroxylon truxillense* c. *Cassia angustifolia*
 b. *Digitalis thapsi* d. *Cassia acutifolia*
10. Select the tests which are suitable for detection of plant Flavanoids
 a. NaOH test and FeCl₃ solution test
 b. Ninhydrine test and Alkaline reagent test
 c. Conc. H₂SO₄ test and Potassium dichromate solution test
 d. Shinoda test and Alkaline reagent test
11. Holotoxins are obtained from
 a. Spirogyra b. Sea cucumber c. Brown algae d. Azolla
12. The hydrolytic products of water soluble fraction of Tragacanth are;
 a. Arabinose, Galactose, and Geddic acid
 b. Tragacanthose, Xylose, and Bassoric acid
 c. Lactose, Agarose, and L-galactose
 d. Amylose, Geddic acid and Araminose
13. Stout and warty trichomes in leaf are the microscopic characteristic of
 a. Aloe b. Lemongrass c. Digitalis d. Senna
14. Animal source of crude drug which is useful during surgery
 a. Leech hirudin b. Red ant's eggs c. Cobra venom d. Peacock fat
15. The content of Linoleic and Linolenic acids together is found lowest in
 a. Castor oil b. Sesame oil c. Olive oil d. Linseed oil

SECTION "B"

[5Q. × 1 = 5 marks]

16. Match the terms used in medicinal uses.

A. Isabgol	() Lung and bronchitis
B. Almond oil	() Anticancer
C. Tamarind	() Brain
D. Camphor oil	() Gastric
E. Podophyllum	() Constipation

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May/June, 2019

31 MAY 2019.

Level : B. Pharm.
Year : II
Time : 2 hrs. 30 mins.

Course : PHAR 204
Semester: I
F. M. : 55

SECTION "C"

[5Q. × 3 = 15 marks]

Attempt *ANY FIVE* questions.

1. Highlight the recent innovation in Pharmacognosy research.
2. Draw a well labeled anatomical diagram of monocot leaf.
3. Explain the pharmacological basis of classification of medicinal plants and give examples.
4. Write down the collection techniques for leaf drugs.
5. Give the WHO guideline for the storage condition of herbal raw materials.
6. Mention some medicinal plant cases which are improved by quality after the application of Gibberellins.
7. Mention some drugs obtained from marine algae.

SECTION "D"

[5Q. × 5 = 25 marks]

Attempt *ANY FIVE* questions.

8. Describe the role of traditional knowledge in the development of medicines.
9. Write short note on 'pharmaceutical aid' from natural sources.
10. Compare the microscopic structures of any essential oil bearing fruit and flower parts of plants.
11. Explain the bioconversion of secondary metabolites by plant tissue culture to obtain pharmaceutical raw materials.
12. Explain the cultivation, processing and preparation of mentha crude drug.
13. Explain the chemistry of non-volatile oils from plants.
14. Define the balsamic products? Give the chemical composition of tolu balsam and storax.

SECTION "E"

[2Q. × 7.5 = 15 marks]

Attempt *ANY TWO* questions.

15. Explain the opportunities on the development of commercial products utilizing Nepalese medicinal plants with special reference to species prioritized by Government of Nepal.
16. Write down the phytochemical methods used to detect secondary metabolites for the quality control of herbal materials.
17. Explain in detailed about the benefits of plant lipids for human health with specific examples.

