

BACHELOR OF PHARMACY (B. PHARM.) (CBCS-2019 COURSE)
B. Pharm. Sem-V : WINTER : 2021
SUBJECT: PHARMACOGNOSY & PHYTOCHEMISTRY-II

Day : Thursday
Date : 20-01-2022

W-20678-2021

Time : 10:00 AM-01:00 PM
Max. Marks: 75

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Answer to both section should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION - I

Q.1 Answer all questions **(20)**

- a) 'Deadly night shade' is synonym for
 - i) Belladonna
 - ii) Ergot
 - iii) Ephedra
 - iv) Opium
- b) This medicine is contraindicated for depression
 - i) Cinchona
 - ii) Belladonna
 - iii) Ergot
 - iv) Rauwolfia
- c) Example of phenanthrine alkaloid
 - i) Morphine
 - ii) Ephedrine
 - iii) Colchicine
 - iv) Quinidine
- d) What is the action of Atropine
 - i) Anti cholinergic
 - ii) Cholinergic
 - iii) Anti adrenergic
 - iv) Adrenergic
- e) Reserpine is a
 - i) Indole alkaloid
 - ii) Piperidine alkaloid
 - iii) Purine alkaloid
 - iv) Amino alkaloids
- f) Quinidine from cinchona is used as
 - i) Anti-cancer
 - ii) Anti-malarial
 - iii) Anti-arrhythmic
 - iv) Anti-gout
- g) The biological source of Sarpagandha is
 - i) *Withania somnifera*
 - ii) *Catharanthus roseus*
 - iii) *Rauwolfia serpentina*
 - iv) *Mentha piperita*
- h) As per 'Isoprene rule'
 - i) Terpenes contain 'head - to - tail' connected isoprenes
 - ii) Terpenes contain 'tail - to - tail' connected isoprenes
 - iii) Terpenes contain 'head - to - head' connected isoprenes
 - iv) Terpenes contain 5n atoms
- i) Iridoids are the class of
 - i) Monoterpenoids
 - ii) Diterpenoids
 - iii) Triterpenoids
 - iv) Sesquiterpenoids
- j) Name of Biosynthetic pathway for Terpenoids
 - i) Shikimic acid pathway
 - ii) Acetate mevalonate pathway
 - iii) Acetate mevalonate pathway
 - iv) Amino acid pathway

P.T.O.

Q.2 Answer any **TWO** from the following **THREE** $2 \times 10 = 20$ **(20)**

- a) Illustrate the basic metabolic pathways in higher plants. Describe the Shikmic Acid pathway in detail.
- b) Discuss the chemistry & chemical classes of Glycosides. Give the therapeutic uses and commercial applications of Senna.
- c) Define extraction. Discuss the key steps to develop an effective extraction protocol for volatile oils. Give the applications of chromatography in the isolation, purification and identification of crude drugs.

SECTION - II

Q.3 Answer any **SEVEN** from the following **NINE** $7 \times 5 = 35$ **35**

- a) Isolation, Identification and Analysis of Caffeine.
- b) Discuss the industrial production and estimation of Diosgenin.
- c) Describe the utilization of radioactive isotopes in the investigation of biogenetic studies.
- d) Give the chemistry, therapeutic uses and commercial applications Menthol.
- e) Explain the isolation, identification and analysis of Glycyrrhetic acid production.
- f) Write a note on Artemisia, its therapeutic uses and industrial production.
- g) Highlight the chemistry, therapeutic uses and commercial application of Ginger.
- h) Explain Taxus and give its biosources, therapeutic uses and commercial applications.
- i) Highlight Vinca alkaloids, their therapeutic uses and industrial production.

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