

M.PHARM. (PHARMACEUTICAL CHEMISTRY) SEM-I
(CBCS-2019 COURSE): MARCH - 2022
SUBJECT : CHEMISTRY OF NATURAL PRODUCTS

Day : Monday
Date : 28.03.2022 M20738 - 2022

Time : 10.00 AM. To 1.00 PM.
Max. Marks : 75

N.B.

- 1) Q.No. 1 and Q.No. 5 are **COMPULSORY**. Out of remaining questions answer **ANY TWO** from each section.
- 2) Answers to both sections should be written in **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate **FULL** marks.

SECTION - I

- Q.1 Classify with examples steroids and describe the chemistry of sex hormones. (08)
- Q.2 Explain the extraction and isolation of flavonoids and with neat chemical reactions elucidate the structure of quercetin. (15)
- Q.3 a) Explain in detail antimalarial drug of natural origin. (10)
b) Describe the chemistry of opioid alkaloids. (05)
- Q.4 Write notes on **ANY TWO** of the following : (15)
- a) Synthesis of ephedrine
 - b) Classification of terpenoids
 - c) Curare alkaloids

SECTION - II

- Q.5 Write a brief note on *Gymnema Sylvester* and *Trigonella foenum graccum* as potential anti diabetic indigenous drugs. (07)
- Q.6 a) Give and elaborate physiological role of Vitamin B2 and B12. Enlist various disorders associated with their deficiency. (05)
b) Describe in details chemistry of Morphine along with their spectroscopic characterization. (05)
c) What is CRISPR? Explain its role as a gene editing tool. (05)
- Q.7 State significance of UV, IR, NMR and Mass spectral data in structural characterization of natural compounds. Support your answer with characterization of at least one phytoconstituents. (15)
- Q.8 Write notes on **ANY TWO** of the following : (15)
- a) *Phyllanthus niruri* in liver dysfunction
 - b) Oligonucleotide therapy
 - c) Vitamin C
