

( 3 Hours )

(Total Marks : 80)

Please check whether you have got the right question paper.

- N.B.:**
- 1) All questions are compulsory.
  - 2) Draw relevant chemical structures and diagrams wherever applicable.

1. a) Answer the following :

(10)

- i) Give any two examples of substitution of crude drugs.
- ii) Give any two methods with suitable examples for extraction of volatile oils.
- iii) State whether following statement is true or false with suitable justification:  
"Cholesterol is the precursor molecule for biosynthesis of Citral".
- iv) Give biological source and therapeutic uses of any one sesquiterpene containing drug.
- v) Give the biological source and chemical constituent with structure of any one wood-based volatile oil drug.
- vi) Write the biological sources of any two sweeteners.
- vii) Give the biological source and commercial significance of palmarosa oil.
- viii) Write the biological source and chemical constituent oleo-gum-resin.
- ix) Write biological source of and chemical constituent of any one condensed tannin-containing drug.
- x) Name any one flavorant and perfume each along with their biological sources.

b) Answer the following:

(10)

- i) With the help of examples, write a note on adulteration of crude drugs.
- ii) Outline general extraction scheme of any one drug, based on its chemical property.
- iii) Write in brief about processing and preparation of Ginger for market.
- iv) Write in brief about commercial application of tannins in synthesis of drug.
- v) What are edible vaccines? Give an example with its use.

2. i) Give source, chemistry, cultivation and collection of clove.

(04)

ii) With suitable structures, illustrate shikimic acid pathway.

(04)

iii) Write a note on different methods of manipulation of secondary metabolites.

(04)

3.
  - i) Write a note on chemical methods of evaluation of crude drugs, as per WHO guidelines. (04)
  - ii) Write a note on isolation, identification and analysis of menthol. (04)
  - iii) Give a detailed account of curcuminoids. (04)
  
4.
  - i) Explain the principle involved, procedure and application of Soxhlet extraction. (04)
  - ii) Compare and contrast pale and black catechu. (04)
  - iii) Write a note on colorants of natural origin. (04)
  
5.
  - i) Write a note on natural drugs containing organosulfur compounds. (04)
  - ii) Give source, chemistry, chemical test and uses of vanillin and oil of wintergreen. (04)
  - iii) Give source, preparation, chemistry, chemical test and uses of Benzoin. (04)
  
6.
  - i) Give an account of two alcohol containing volatile oil drugs. (04)
  - ii) Write a note on green tea. (04)
  - iii) Write a note on supercritical fluid extraction. (04)