

[Time: Three Hours]

[Marks: 70]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. Draw chemical structures & diagrams wherever necessary.

Q.1 Answer the following:

15

1. Name the precursor molecule for biosynthesis of Colchicine.
2. Give biological source & use of Sesame oil.
3. Name a nutraceutical and its probable active constituent, used as an immunomodulator.
4. Name and draw the structure of active constituent present in Mustard seeds.
5. Give the biological source of a drug that answer Thalleoquin test positive.
6. Write the principle of a confirmatory test for true tannins.
7. What are the active constituents and demerits of Tobacco as a natural pesticide?
8. Name the confirmatory test for detection of Linseed oil and its observation.
9. Give the biological source and name the active constituents of Poison ivy.
10. Give composition and properties of Tagetes.
11. Write the active constituents and uses of Henna.
12. Give the biological source & active constituent of an anthraquinone drug used as an anti-depressant.
13. Name & draw any two differentiating diagnostic microscopic characters of Kurchi and Arjuna.
14. Give biological source & uses of Alfa-Alfa.
15. Give biological source & active constituent of a terpene alkaloid.

- Q.2 i. Give a detailed account of biological source, chemistry, substituents and uses of Spermaceti wax. **04**
 ii. Discuss Galls with respect to preparation, chemistry and applications. **04**
 iii. Outline the biosynthetic pathway of tropane alkaloids. **03**
- Q.3 i. Give a detailed account of Cochineal with respect of cultivation preparation chemistry and application. **04**
 ii. Write a note on cyanogenetic glycosides. **04**
 iii. Discuss Neem as a natural pesticide. **03**
- Q.4 i. Give the detailed account of Ergot. **04**
 ii. Write a short note on Wheat germ oil and Hydrocarpus oil. **04**
 iii. Give an account of Gymnema and Momordica as nutraceutical. **03**
- Q.5 i. Discuss the pharmacognosy of Senna. **04**
 ii. Discuss chemistry, preparation and uses of 'Opium' **04**
 iii. Write the biological source, preparation and chemical constituents of black Catechu. **03**
- Q.6 i. Give an account of Kokum butter and Cocoa butter. **04**
 ii. Give the pharmacognosy of Nux Vomica. **04**
 iii. Write a short note on Sulphur containing compounds. **03**