S.No: 78 BATCH: 2017 Reg. No.:

END OF SEMESTER EXAMINATIONS, APRIL / MAY – 2019
ORGANIC CHEMISTRY - III
SUBJECT CODE: 17P3CH10

MAJOR : M.Sc. (Chemistry) SEMESTER :III
TIME : 3 HOURS MAX. MARKS : 70

SECTION – A (10 x 1 = 10)

Answer ALL the Questions:

1. What are Anthocyanins?
2. Define the term Chemotheraphy.
3. Indicate the nature of hydroxyl group in cholesterol.
4. Give the structure of Vitamin - D_2.
5. State Isoprene rule.
6. Give one example of bicyclic sesquiterpenoids.
7. What is Gilmans reagent? Indicate one use of it.
8. Complete the following reaction.

$$HCHO \xrightarrow[(ii)\quad H^+]{(i)\ CH_3mgI}$$

9. Define the term synthons.
10. Give one example for each donor and acceptor synthons.

SECTION – B (5 x 4 = 20)

Answer ALL the Questions:

11. a) Outline the Kostanecki synthesis of flavones.

(OR)

b) How is $\beta-lactam$ structure of pericillin established with the help of IR spectroscopy.

12. a) How is cholesterol converted into progesterone?

(OR)

b) Outline the synthesis of equilenin.

13. a) How is the position of angular methyl group established in abetic acid.

(OR)

b) Outline the biosynthesis of terpenoids.

14. a) Enumerate any four synthetic applications of diborane.

(OR)

b) Give an account of sharpless assymmetric epoxidation.

15. a) Write note on retrosynthesis.

(OR)

b) Give a brief account on chemoselectivity of reactions.

SECTION – C (5 x 8 = 40)

Answer ALL the Questions:

16. a) Discuss the structure and synthesis of flavanol.

(OR)

b) Elucidate the structure of chloromycetin. Substantiate it by synthesis.

17. a) Discuss the constitution of ergosterol.

(OR)

b) Give an account of structure of oestrone and its synthesis.

18. a) Establish the structure of gingiberene. Give its synthesis.

(OR)

b) Give an account of ring sizes of caryophyllene.

19. a) Outline the synthetic applications of

i) 1,3 – *Dithianes* ii) OsO_4 (4+4 Marks)

(OR)

b) Write notes on: i). Wilkinson catalyst ii).Woodward prevost hydroxylation

20. a) Explain the term disconnection approach. Illustrate with examples one group disconnection approach of $C-X$ and $C-C$ bonds. (2+3+3 Marks)

(OR)

b) Give a detailed account of protecting groups in synthesis reactions.

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