C 40515   (Pages : 2)   Name....................................

Reg. No.................................

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2023

(CBCSS—UG)

Chemistry/Polymer Chemistry

CHE 6B 10—ORGANIC CHEMISTRY—III

(2019 Admission onwards)

Time : Two Hours   Maximum : 60 Marks

Section A

Answer all questions.
Each question carries 2 marks.

1. State Beer -Lambert Law.

2. Write the chromophore present in nitrobenzene.

3. What is R_f value in TLC ?

4. Predict the λmax of 3-methylpent-3-en-2-one.

5. Draw the structure of epimer of D(+) Glucose.

6. What are products formed when glucose is treated with periodic acid?

7. Give one example of a disaccharide. Draw its structure.

8. Write the composition of invert sugar.

9. Represent the zwitter ion of an amino acid.

10. What is ninhydrin test ?

11. What are the constituents of nucleic acids ?

12. What is the effect of hydrogenation of double bonds in oils ?

(Ceiling 20)

Turn over

Section B

*Answer **all** questions.*
Each question carries 5 marks.

13. What are Anomers ? Explain mutarotation.

14. Give an account on classification of vitamins. List the diseases caused by their deficiency.

15. Write notes on physiological functions of nicotine and coniine. Draw their structures.

16. Describe the general principle of extraction of alkaloids. Draw the structure of quinine

17. Represent the molecular orbitals of ethylene and 1, 3- butadiene. Write the number of present.

18. Explain the feasibility of thermal and photochemical reactions of 2+2 cycloaddition reaction FMO approach.

19. Describe the mechanism of Claisen rearrangement.

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Section C

*Answer any **one** questions.*
The question carries 10 marks.

20. (a) What is chemical shift ?

   (b) Explain spin-spin splitting. Predict the ^1H nmr spectra of ethyl acetate and propanoic a

21. (a) Describe the Strecker synthesis of Phenyl alanine

   (b) Explain the principle of solid -phase polypeptide synthesis

$(1 \times 10 = 10$ ma