C 40517 (Pages : 2) Name.....

Reg. No.....

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2023

(CBCSS—UG)

Chemistry

CHE 6B 12—ADVANCED AND APPLIED CHEMISTRY

(2019 Admission onwards)

Time : Two Hours Maximum : 60 Marks

Section A

Answer **all** *questions.*

Each question carries 2 marks.

1. What are the types of Carbon nano tubes ?
2. What are the types of Colloids ?
3. What is meant by electrical double layer in colloids ?
4. Why green chemistry is needed ?
5. Explain the green synthesis of Ibuprofen ?
6. Name two software used in computational chemistry.
7. What is Glass ?
8. What are Propellants ?
9. Define cetane number.
10. Define Saponification.
11. Define artificial sweetners with examples.
12. How will you synthesize Rosaniline ?

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Turn over

Section B (Paragraph)

Answer **all** *questions.*
Each question carries 5 marks.
Answer questions upto 30 marks.
Each question carries 5 marks.

13. Distinguish between the bottom up and top down methods of nano scale synthesis.

14. Explain the application of combinatorial synthesis.

15. Distinguish between molecular mechanics method and electronic structure method in comput chemistry.

16. Explain the synthesis and applications of :

    (a) PAN ; and

    (b) PMMA.

17. Write a short note on fertilizers.

18. Explain the cleansing action of soap.

19. Write short notes on permitted and non-permitted food colours.

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Section C (Essay)

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

20. Write short notes on :

    (a) Green aspects of Diels-Alder reaction.

    (b) Computational chemistry as a tool and its scope.

    (c) Differentiate between Nylon 6 and Nylon 66.

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21. Write short notes on :

    (a) Cement.

    (b) Antiseptic and disinfectants.

    (c) Food preservative.

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