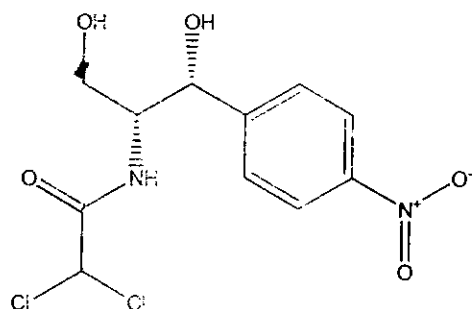


Chemistry (P.G.)**[CBCS]****M.Sc. Fourth Semester End Examination-2024****(Regular & Supplementary Paper)****PAPER-CEM 404****Chemical Principles in Applied Science and Technology
(Organic Spl.)****Full Marks: 40****Time: 02 Hrs***The figures in the right hand margin indicate marks**Candidates are required to give their answers in their own words as far as practicable**Illustrate the answers wherever necessary***Group-A****Answer any four of the following question****4x2=8**

1. Write down the generic and chemical name of the following compound



2. Define the term "Chemotherapeutic index".
3. Explain how the fatty acid composition of the triglycerides determines whether a substance is a fat or oil.

(2)

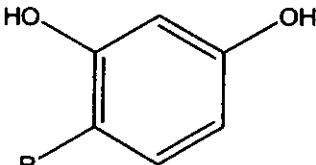
4. Explain why fats and oils are referred to as triglycerides.
5. What is the hydrogenation of vegetable oils?
6. What are the iodine number for Semi-drying oil and Non-drying oil?
7. What is prodrug? Give example.

Group-B

Answer any four of the following question

4x8 = 32

8. a). Write down differences between Codex and ISO.
b). What is Codex Alimentarius?
c). Explain the result of relative antibacterial activity of the given compound w.r.t phenol.

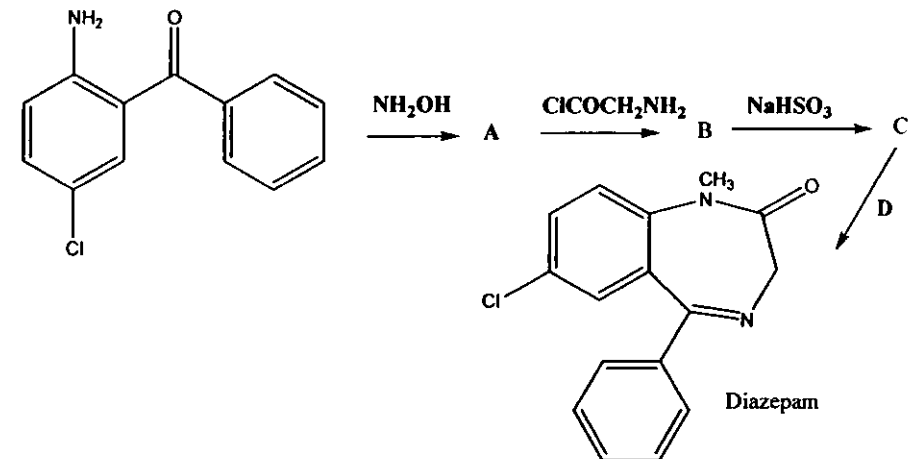
Compound	R=	Relative antibacterial activity
	propyl	5
	butyl	22
	pentyl	33
	hexyl	51
	heptyl	30
	octyl	0

3+2+3 = 8

9. a). Give diagrammatically the relationship of medicinal chemistry to other disciplines.

(3)

- b). What is pharmacopocia? Add a note on Indian Pharmacopocia.
- c). Give one example of each antifungal and antiviral drugs.
3+3+2=8
10. a). Describe the importance of key reactions of triglycerides, such as hydrolysis, hydrogenation, and oxidation.
b). Name the reaction which is commonly used in the conversion of vegetable oils to fats. Explain the reaction involved in detail.
c). Propose a mechanistic pathway for the formation of oligomer or polymer during drying oil.
3+3+2=8
11. a). What is Rancidity? Explain the three pathways for Rancidification.
b). What is Saponification value? Mention the reagents required for Saponification. Write significance of Saponification value?
4+4=8
12. a). Fill the blank from A to D and what type of drug is the final product?



(4)

b). Discuss the significance of 'HACCP'.

c). List the national and international food standards.

4+2+2 = 8

13. a). Explain the importance of various issues related to food safety and quality.

b) Explain the terms: toxicity, contamination, food quality, adulteration.

3+5=8
