QP CODE: 22100915

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Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, APRIL 2022

Sixth Semester

CORE COURSE - CH6CRT10 - ORGANIC CHEMISTRY - IV

Common for B.Sc Chemistry Model I, B.Sc Chemistry Model II Industrial Chemistry & B.Sc Chemistry Model III Petrochemicals

2017 Admission Onwards

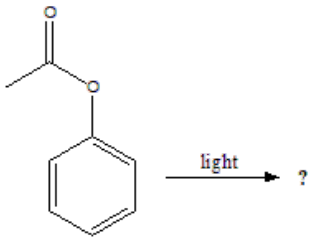
04160362

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is the addition product of natural rubber with halogen acid?
2. What are simple lipids? give examples?
3. What fatty acid is present in butter?
4. What are the biological functions of vitamin C?
5. What are γ- amino acids?Give one example.
6. Write the name of the C-terminal residue in the given tripeptide: Gly-Ala-Phe
7. Name one enzyme deficiency disease.
8. Define supramolecular chemistry
9. 

Predic the product.
10. Define auxochrome. Give an example.
11. Define fundamental vibrations.
12. How can you identify chloro and bromo substitution in a compound using mass spectrum ?

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Give the structure of any two monoterpenoids and list there uses.
14. Detail about the environmental aspects of detergent use.
15. Write a note on artificial hormones.
16. Discuss in brief the denaturation of proteins.
17. Write the differences between DNA and RNA.
18. Write the mechanism of enzyme action
19. Explain molecular recognition in DNA
20. Explain why pshophorescence lasts much longer than fluorescence.
21. An organic compound with molecular formula C4H8O exhibits following spectral data: UV : λ max= 275nm, ε max=17; IR data: 2941-2857(m), 1715 (s) and 1460 (m) cm-1; NMR data: δ= 2.42 (2H, quartet); 2.12 (3H,singlet); 1.07 (3H, triplet). Identify the organic compound

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Discuss the structure elucidation of piperine.
23. Explain the different end group analyses used for the determination of primary structure of proteins.
24. Write a note on the important functions of nucleic acids.
25. (a) An organic compound with molecular formula $C_6H_{10}O_3$ exhibits following ^1H NMR data:δ=2.2 (3H,singlet); 3.5(2H,singlet) ; 1.2 (3H,triplet); 4.1(2H,quartet). Identify the compound. (b) Explain and sketch the nmr spectrum of ethyl chloride.

(2×10=20)