(Pages : 4)

ALL SAINTS COLLEGE LIBRARY
No.
TRIVANDRUM

N – 1334

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2022.

First Degree Programme under CBCSS

Chemistry

Core Course – XI

CH 1642 – ORGANIC CHEMISTRY III

(2018 & 2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

(Answer **all** questions. Each question carries **1** mark.)

1. Carbohydrates which vary in one position for the placement of the -OH group are called ————

2. Pyridine is ———— basic than pyrrole

3. The structural of aspirin is ————

4. The ———— is the pH at which a particular molecule carries no net electrical charge

5. The process by which a double-stranded DNA molecule is copied to produce two identical DNA molecules is called ————

6. Natural rubber is composed of units of ————

7. The ratio of weight average to the number average molecular weight of a polymer is termed as _____

8. Zinger – Natta catalyst is _____

9. The existence of two or more chemical compounds that are capable of facile interconversion is called _____

10. Grignard reagents contains _____ metal

(10 × 1 = 10 Marks)

SECTION – B

(Answer **any eight** questions. Each question carries **2** marks.)

11. What are the main reactions of glucose?

12. Discuss the Haworth projection formula

13. What are the methods used to determine the ring size of a carbohydrate?

14. What is Fischer Indole synthesis?

15. What are the applications of chloroquine?

16. What is Skraup synthesis?

17. What are essential amino acids? What are their functions?

18. What is meant by denaturation of proteins?

19. What is meant by rancidity?

20. What is genetic code?

21. What is nylon 66? How is it Prepared?

22. What is meant by degree of polymerization?

23. What are thermosetting Polymers?

24. What are the uses of SeO_2?

25. What is Reformatsky Reaction?

26. What are the synthetic applications of acetoacetic ester?

(8 × 2 = 16 Marks)

SECTION – C

(Answer **any six** questions. Each question carries **4** marks.)

27. What are the applications of cellulose?

28. Write the steps involved in the conversion of glucose to fructose.

29. Explain the aromaticity of heterocyclic compounds.

30. Describe any two methods for synthesis of furan

31. Describe any two methods of synthesis of peptides

32. Briefly explain the stereochemistry of amino acids

33. What are lipids? What are their biological functions?

34. What is vulcanization? How is it performed? What are its advantages?

35. Discuss the mechanism of cationic addition polymerization

36. What are the different additives used along with polymers? What are their functions?

37. Explain the preparation and reactions of lithium dialkyl cuprates.

38. Describe the mechanism of Claisen condensation

(6 × 4 = 24 Marks)

SECTION – D

(Answer **any two** questions. Each question carries **15** marks.)

39. Explain the classification and nomenclature of carbohydrates.

40. Explain the synthesis and uses of any three sulfa drugs

41. Explain the various methods for the synthesis of amino acids.

42. What are vitamins? Explain the deficiency diseases caused by different vitamins.

43. Explain the various types of polymers with examples.

44. Explain the preparation, properties and synthetic applications of organo zinc compounds.

(2 × 15 = 30 Marks)
