

Reg. No.:



Name:

University of Kerala

W6792

Third Semester FYUGP Degree Examination, November 2025

Discipline Specific Core Course

CHEMISTRY

UK3DSCCHE203 - NATURAL PRODUCT CHEMISTRY

Academic Level: 200-299

2024 Admission

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

**Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark
Each.Answer all questions**

Qn No.	Question	CL	CO
1	Write the central metal atom in chlorophyll.	RE	1
2	Define epimers?	RE	4
3	Which alkaloid is commonly used as a pain reliever?	UN	3
4	Give two examples for biodegradable polymers	UN	4
5	Name the metal present in Chlorophyll	UN	1
6	Give the general structure of an α -amino acid.	UN	2

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Explain briefly the classification of carbohydrates.	UN	4
8	Differentiate between transcription and translation.	UN	2
9	Illustrate isoprene rule using an example	AP	3
10	Illustrate the role of magnesium in chlorophyll during photosynthesis.	AP	1

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Illustrate the mechanism of oxygen and carbon dioxide transportation . OR B) Construct and explain the different steps involved in the nitrogen cycle with suitable examples.	AP	1, 1
12	A) Examine the structural and functional differences between DNA and RNA OR B) Examine the properties of enzymes and discuss its roles.	AN	2, 2
13	A) Compare the properties and sources of fat soluble and water soluble vitamins. OR B) Evaluate the potential uses of terpenes in pharmaceuticals, focusing on their bioactive properties	EV	3, 3
14	A) Formulate the steps in vulcanization; compile the characteristics and applications of vulcanized rubber. OR B) Prepare a synthetic route to convert glucose into its corresponding fructose, showing all intermediate steps. Draw the open-chain and cyclic (pyranose/furanose) forms of both sugars.	CR	4, 4