Reg. No. | | | | | | | | |

G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2025.

(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: B.Sc., CHEMISTRY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
II	PART-III	CORE-2	U23CH202	GENERAL CHEMISTRY-II

Date & Session: 08.11.2025/AN **Time: 3 hours** **Maximum: 75 Marks**

Course Outcome	Bloom's K-level	Q. No.	SECTION – A (10 X 1 = 10 Marks) Answer ALL Questions.
CO1	K1	1.	The colour of phenolphthalein in alkaline solution is _____. a) Yellow b) Pink c) Colourless d) Blue
CO1	K2	2.	The addition of HCl will not suppress the ionization of which of the following a) CH_3COOH b) H_2SO_4 c) H_2S d) C_6H_5COOH
CO2	K1	3.	The metal which forms only monoxide is _____. a) Hydrogen b) Lithium c) Rubidium d) Caesium
CO2	K2	4.	Alkali metals lose electrons when exposed to light is due to _____. a) Electronegativity b) Oxidising power c) Small size d) Photoelectric effect
CO3	K1	5.	The essential element in bone is _____. a) Carbon b) Nitrogen c) Phosphorus d) Iron
CO3	K2	6.	The metal which is rendered passive by concentrated nitric acid is _____. a) Zinc b) Copper c) Gold d) Iron
CO4	K1	7.	Catalyst used in elimination reaction is _____. a) aqu. KOH b) Alc. KOH c) Ni/Co d) Pt/Pd
CO4	K2	8.	The most stable alkadiene is _____. a) 1,2-butadiene b) 1,3-butadiene c) 1,2-propadiene d) 1,4-pentadiene
CO5	K1	9.	Which of the following does not follow Huckle's rule _____. a) Benzene b) Cyclohexane c) Naphthalene d) Anthracene
CO5	K2	10.	Naphthalene on oxidation with acidic $KMnO_4$ gives _____. a) Phthalic acid b) Phthalonic acid c) Phthalic anhydride d) 1,4-naphthaquinone

Course Outcome	Bloom's K-level	Q. No.	**SECTION – B (5 X 5 = 25 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	11a.	Explain Lewis concept of acid and base. **(OR)**
CO1	K3	11b.	What is common ion effect? Explain its applications.
CO2	K3	12a.	How will you prepare caustic soda? **(OR)**
CO2	K3	12b.	How is Borazine prepared? Write its structure.
CO3	K4	13a.	Investigate the process involved in manufacture of ozone. **(OR)**
CO3	K4	13b.	Explain the peculiarities of fluorine.
CO4	K4	14a.	Contrast the composition uses of various petroleum products. **(OR)**
CO4	K4	14b.	Explain Bayers strain theory.
CO5	K5	15a.	Explain Huckel's rule of aromaticity. **(OR)**
CO5	K5	15b.	Explain the effect of substituent orientation.

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	16a.	Explain the applications of solubility product principle. **(OR)**
CO1	K3	16b.	Illustrate theory of acid base indicators with suitable graph.
CO2	K4	17a.	Discuss the extraction of Aluminium. What are its uses. **(OR)**
CO2	K4	17b.	Explain the diagonal relationship of Lithium and Magnesium.
CO3	K4	18a.	Analyze the general characteristics of group 16 elements. **(OR)**
CO3	K4	18b.	Explain the manufacture of nitric acid using Ostwald process.
CO4	K5	19a.	Explain Orbital theory and Resonance theory. **(OR)**
CO4	K5	19b.	Explain stereochemistry of E1 and E2 reactions.
CO5	K5	20a.	Explain the mechanism of Friedel-Craft alkylation and acylation. **(OR)**
CO5	K5	20b.	Discuss the preparation, reactions and uses of anthracene.