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

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

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.
(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: B.Sc., BOTANY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
III	PART - III	ELECTIVE GENERIC - 3	U23CH3AB3	CHEMISTRY FOR BIOLOGICAL SCIENCES-I

Date & Session: 14.11.2024 / 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.	Bond order of Hydrogen molecule is _____. a) 4 b) 3 c) 2 d) 1
CO1	K2	2.	The energy of Stellar energy is based on ____. a) Nuclear fusion b) Nuclear fission c) Hydrogen burning d) none of the above
CO2	K1	3.	CNG is a fuel gas mainly composed of _____. a) Methane b) propane c) Butane d) Ether
CO2	K2	4.	Find, Which one of the following is not a nitrogenous fertilizer? a) Ammonium sulphate b) Superphosphate of lime c) Potassium nitrate d) Urea
CO3	K1	5.	Hybridization of acetylene is _____. a) sp^3 b) sp^2 c) sp d) sp^3d
CO3	K2	6.	Which of the following statement is correct about aromatic compounds? a) They are cyclic b) planar c) having (4n+2) π electrons d) all the above
CO4	K1	7.	Identify the correct pair relevant to drugs. a) Antipyretics- chloramphenicol b) Antibiotics-paracetomol c) Antiseptic-chloroform d) Anesthetics-ether
CO4	K2	8.	Identify the correct material used in non-stick cook wares. a) Polystyrene b) polyethylene c) Teflon d) Polyacetylene
CO5	K1	9.	Volumetric analysis is a technique of _____. a) qualitative b) quantitative c) identification technique d) none of the above
CO5	K2	10.	Chromatographic techniques are used to separate and analyse. a) simple mixtures b) complex mixtures c) viscous mixtures d) alloys

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.	What are bonding, anti-bonding and non-bonding orbitals?
			(OR)
CO1	K3	11b.	Give the medicinal applications of radioisotopes.
CO2	K3	12a.	Write a note on LPG and oil gas.
			(OR)
CO2	K3	12b.	Write the synthesis and uses of silicones.
CO3	K4	13a.	Write the hybridisation and geometry of benzene.
			(OR)
CO3	K4	13b.	Write the mechanism of nitration in aromatic compounds.
CO4	K4	14a.	Examine the structure and uses of paracetamol and aspirin
			(OR)
CO4	K4	14b.	Illustrate artificial sweetener with example.
CO5	K5	15a.	Determine unknown concentration of the analyte using Volumetric principles.
			(OR)
CO5	K5	15b.	Interpret the principle and application of paper chromatography.

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.	Give the molecular orbital diagram of nitrogen and discuss about its bond order and magnetic properties.
			(OR)
CO1	K3	16b.	Describe nuclear fission and fusion reactions with examples.
CO2	K4	17a.	What are meant by natural gas and water gas?
			(OR)
CO2	K4	17b.	Write a note on phosphate fertilizers.
CO3	K4	18a.	Analyze a brief notes on hyper conjugation with example.
			(OR)
CO3	K4	18b.	Clarify preparation and properties of pyrrole and pyridine.
CO4	K5	19a.	Explain the structure and uses of penicillin.
			(OR)
CO4	K5	19b.	Discuss about Freon and Teflon.
CO5	K5	20a.	Discuss purification and separation techniques with examples.
			(OR)
CO5	K5	20b.	Evaluate the principle and application of column chromatography.