Reg. No. [ ][ ][ ][ ][ ][ ][ ]

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

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.
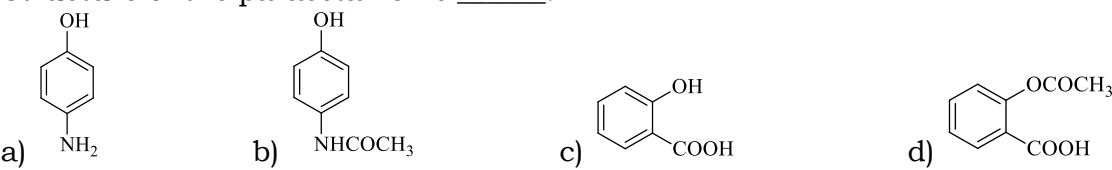(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., PHYSICS AND BOTANY

| SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
II & IV	PART – III	ELECTIVE GENERIC	U21CH2A2 / U21CH4A4	ALLIED CHEMISTRY II

Date & Session: 12.11.2024/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.	The characteristics of an aromatic compound should be _____. a) cyclic b) planar c) (4n+2) π electrons d) all the above
CO1	K2	2.	On catalytic reduction using nickel, Naphthalene gives _____. a) b) c) d)
CO2	K1	3.	The time required for a given amount of that element to decay to one half of its original value is called _____. a) decay constant b) radioactive constant c) disintegration constant d) half- life period
CO2	K2	4.	In Carbon dating, which carbon isotope is used _____. a) C^{12} b) C^{13} c) C^{14} d) None of these
CO3	K1	5.	Among the following, which is/are monosaccharide _____? a) glucose b) sucrose c) starch d) all of these
CO3	K2	6.	Predict, Which is the basic building block of Proteins? a) nucleotide b) amino acid c) lipid d) carbohydrate
CO4	K1	7.	Find from the following, which one is commonly used as a starter fertilizer for young plants? a) urea b) NPK fertilizer c) super phosphate d) ammonium nitrate
CO4	K2	8.	L.P.G. refers _____. a) Liquefied petroleum gas b) Liquid petroleum gel c) Liquid petroleum gas d) None of these
CO5	K1	9.	Structure of the paracetamol is _____. a) b) c) d)
CO5	K2	10.	Botanical name of Keezhanelli is _____. a) *Acalypha indica* b) *Azardirachta indica* c) *Phyllanthus niruri* d) *Holy basil*

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.	Illustrate the general characteristics of aromatic compounds and give three examples? (3.5+1.5 M)
			(OR)
CO1	K3	11b.	Find the products of nitration in naphthalene by its temperature variation?
CO2	K3	12a.	Calculate the mass defect of the He_2 molecule. [Given: actual mass of He_2 is 4.00390 a.m.u, calculated mass of He_2 is 4.03411 a.m.u]
			(OR)
CO2	K3	12b.	Identify the number of neutrons and protons of the listed uranium isotopes. i) $_{92}U^{235}$ ii) $_{92}U^{237}$ iii) $_{92}U^{238}$ iv) $_{92}U^{229}$ v) $_{93}U^{233}$
CO3	K4	13a.	Clarify the term amino acid with examples and describe the amphoteric nature of it.
			(OR)
CO3	K4	13b.	Categorize the different types of carbohydrates.
CO4	K4	14a.	Investigate the qualities of good fuel.
			(OR)
CO4	K4	14b.	Compare: Soap and detergents.
CO5	K5	15a.	How would have handled the infective diseases.
			(OR)
CO5	K5	15b.	Assess the consequences of diabetes.

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.	Using Huckel's rule, examine the following as aromatic, anti-aromatic and non-aromatic and write their names. i) ii) iii) iv) v)
			(OR)
CO1	K3	16b.	Compute any five chemical properties of Benzene.
CO2	K4	17a.	Categorize the applications of radioisotopes in various fields.
			(OR)
CO2	K4	17b.	Differentiate nuclear fission reaction from nuclear fusion reaction.
CO3	K4	18a.	What are the key differences of DNA and RNA in terms of structure and functions?
			(OR)
CO3	K4	18b.	Deduce the primary and secondary structure of proteins.
CO4	K5	19a.	Conclude the preparation, properties and uses of nitrogen fertilizers.
			(OR)
CO4	K5	19b.	Recommend any two manufacturing of the following: i) Portland cement ii) Safety glass iii) Soap (or) detergents
CO5	K5	20a.	Examine the functions of analgestics, antipyretics and antibiotics.
			(OR)
CO5	K5	20b.	Recommend your views about the applications of Indian medicinal plants.