

ROYAL COLLEGE OF ARTS, SCIENCE AND COMMERCE

Semester-V Examination

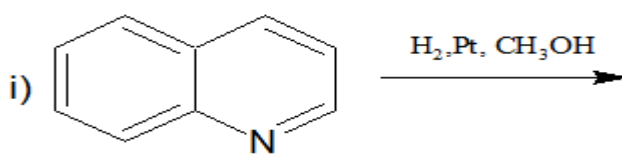
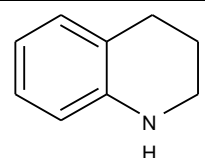
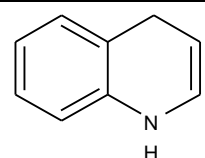
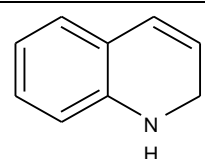
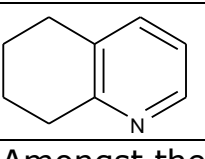
(Sample Question Paper)

T.Y.B.Sc

CHEMISTRY-III (Organic)

CODE-USCH503

	Fill in the blanks by choosing the most appropriate option:	Unit
1	A nucleophile	I
	a attacks at position of high electron density.	
	b is an electron deficient species.	
	c is positively charged.	
	d is an electron rich species.	
2	Conversion of CH_3COOH to CH_3CONH_2 is an that follows mechanism.	I
	a Acyl electrophilic substitution; tetrahedral	
	b Alkyl electrophilic substitution, E_1	
	c Alkyl nucleophilic substitution: E_2	
	d Acyl nucleophilic substitution: tetrahedral	
3	Conversion of benzophenone to benzpinacol in the presence of UV light is	I
	a photoisomerisation	
	b photosensitisation	
	c photoreduction	
	d photochemical rearrangement	
4	Name the following reaction:	I
	a Cope rearrangement	
	b Claisen rearrangement	
	c Sigmatropic rearrangement	
	d Chelotropic reaction	
5	ISC stands for	I
	a Inter-System Crossing	
	b Internal System Crossing	

	c	Intra-System Crossing	
	d	Internally Sensitised Crossover	
6		Atropisomerism is due to restricted rotation around and is due to large substituents in biphenyls.	II
	a	C-C ; para	
	b	C-C ; ortho	
	c	C=C ; para	
	d	C=C ; ortho	
7		Hexachlorocyclopentadiene is used to synthesise	II
	a	Antu	
	b	Auxins	
	c	Indole 3- acetic acid	
	d	Endosulfan	
8		<p>i) </p> <p>Identify the product</p>	II
	a		
	b		
	c		
	d		
9		Amongst the following is the most basic in nature.	II
	a	Pyridine	
	b	Pyridine N-oxide	
	c	Quinolone	
	d	Quinolone N- oxide	
10		A chiral allene has of symmetry.	II

	a	alternating axis	
	b	centre	
	c	plane	
	d		
11		The simplest family of allene	III
	a	Ethene	
	b	Propadiene	
	c	butadiene	
	d	benzene	
12		The correct IUPAC name of $\text{CH}_2=\text{C}=\text{C}=\text{CH}-\text{CHO}$	III
	a	Pentanal	
	b	Penta-2,3,4-trienoic acid	
	c	Penta-2,3,4-trienal	
	d	Penta-1,2,3-trienoic acid	
13		Which of the following is correct for the synthesis of Benadryl?	III
	a	multicomponent synthesis	
	b	Convergent synthesis	
	c	Linear synthesis	
	d	single step synthesis	
14		According to the Principle of green Chemistry, prevention is always better than	III
	a	application	
	b	cure	
	c	rejection	
	d	synthesis	
15		Glucose is used as starting material in green synthesis of	III
	a	acetic acid	
	b	Nylon 6	
	c	Hexmethylene diamine	
	d	Adipic acid	
16		Introduction of a $-\text{OH}$ group in benzene causes ashift due to interaction.	IV
	a	bathochromic; chromophore-chromopore	
	b	bathochromic; chromophore-auxochrome	
	c	hypsochromic ; chromophore-chromopore	
	d	hypsochromic; chromophore-auxochrome	
17		A peak at m/z 29 is due to	IV
	a	$\cdot\text{CH}_3$	
	b	$^+\text{CH}_3$	

	c	$\cdot\text{C}_2\text{H}_5$	
	d	$^+\text{C}_2\text{H}_5$	
18		Citral is a	IV
	a	cyclic terpenoid	
	b	acyclic terpenoid	
	c	diterpenoid	
	d	sesquiterpenoid	
19		Isoprene is	IV
	a	2-methyl- 1,3-butadiene	
	b	2-ethyl- 1,3-butadiene	
	c	2-methyl- 1,3-pentadiene	
	d	2-ethyl- 1,3-pentadiene	
20		The nature of the 2 nitrogens in nicotine is	IV
	a	both secondary	
	b	both tertiary	
	c	one secondary and one tertiary	
	d	one primary and one secondary	