

DOON UNIVERSITY, DEHRADUN
End Semester Examination, Third Semester, 12 December 2016
Department of Chemistry, School of Physical Sciences (SoPS)
Integrated M.Sc. 5 Years (Chemistry)

Course: Organic Chemistry-II

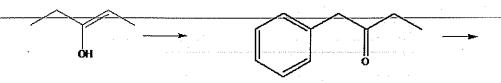
Course: Organ	iic Chemistry-II			Course Code	e: CYC-203
Time Allowed:			31 36		ım Marks: 30
Note: Attempt All	Questions from Sect	tions A, B and C.		and the second second	
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SECTION: A	" Startes Description of the Prince	65500000000			(Marks: 6)
, J	Salara agrantis de Esta Maria de La Carta		consideration of the second of	power-hot de name	
			Agents of products	CONTRACTOR OF THE PARTY OF THE	
[1] Explain why	must ethanoyl cl	hloride be prot	ected from at	tmospherie me	oisture during
storage.		LLENGS STATE OF THE THE TRANSPORT OF THE THE TRANSPORT OF THE TRANSPORT O	y iii. Saasiii yeenee yee oo o	S. Sept.	
[7] What is the	Nor was			and it	
derivatives of a	characteristic react arboxylic acids in	daeraacina derr daeraacina oo	valives of car	boxylic acids	Arrange the
reaction?	aroovine arms iff	acticasing of	ici Or reactiv	ny towants i	ms panicuar 11
S. C. Sandalananananananananananananananananana	450200000000000000000000000000000000000	Marie Charles		Tarak tahu tagan ing panggan at ang at a	Unique de la companya del companya dela companya de la companya de
[3] Propanoic ac	id has a boiling po	oint of 141°C v	vhich is cons	iderably highe	r than that of
butan-1-ol (117°	C), although they ha	ave the same mo	lecular mass.	Explain why.	[1]
[4] Arrange the 6	ollowing compound	تأتمسه الأأثا	ander of calch		£ 15
f-1% munto mo n				into in water:	L.J.J
CH₃CH₂C	H₂COOH, [©] CH₃(CH ₂ COOCH ₃	and CH ₃ C	о́он	
ren e	4. 14. 15.		(N/FIC	XCITS	
[5] Explain wny acid.	alkyl sulphonic ac	cids are more a	icidic than th	e correspondu	
acid.	A STATE OF THE PARTY OF THE PAR	- Armon	trace		[1]
[6] Why cannot d	liphenyl ethers be p	repared by dehy	dration of pho	enol with conc	.H ₂ SO ₄ ? [1]
	A STATE OF THE STA		AP Guerr		
	~~ 44 \$ 25		- September 1		
SECTION: B					(Marks: 12)
e grandalpe deli				Hard Buddels of the	
					•
[1] Write the che	emical equations fo	or the acid-catal	yzed and alk	ali-catalyzed l	nydrolyses of
each of the follow	wing compounds: ((i) Ethyl butano	oate and (ii)	Propanamide	(iii) Benzoyl
chloride			, , , , , , , , , , , , , , , , , , , ,	•	[3]
[2] (i) How does a	n Enolate function	as an amhident	nucleonhile?	÷	Г11

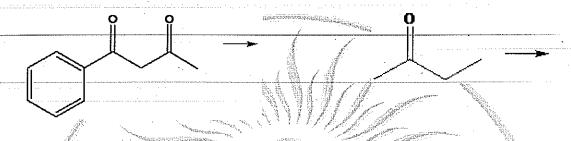
(ii) Why is the alpha-Hydrogen acidic in carbonyl compounds?

[1]

[3] Draw the tautomers of the following compounds?

[2]





- [4] Write the structures of the possible products formed after the reaction between RCOOH and R'COOH in presence of heat and P_4O_{10} ? [2]
- [5] Explain why ethanol is a liquid while ethane is a gas at room temperature.
- [6] How can aspirin be prepared from benzene?

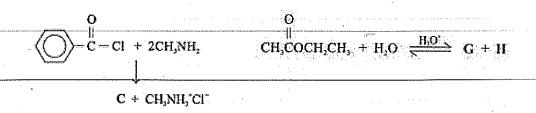
[2]

SECTION: C

(Marks: 12)

- [1] (a) Outline how you can separate a mixture of butanone (b.p. = 79.6 °C) and 1 chlorobutane (b.p. = 78.5 °C) in ether. [2]
 - (b) Draw the structural formulae of the missing compounds A to H in following reactions? [2]

$$\begin{array}{c} O \\ \parallel \\ -CH_{i}CCI + H_{2}O \longrightarrow A + HCI \end{array} \qquad \begin{array}{c} CH_{i} - C - O - C - CH_{i}CH_{i} + H_{i}O \longrightarrow D + E \end{array}$$



(c) Why are esters less acidic than aldehydes and ketones? Explain.

[2]

[2] (a) Explain the Dieckmann Cyclization, Hoffman Bromamide Degradation and Curtius Rearrangement.

[1+1+1]

(b) Explain the following name reactions: Rowalt Blanc reduction Pinacol.

(b) Explain the following name reactions: Bouvaelt Blanc reduction, Pinacol-Pinacolone rearrangement and Fries rearrangement. [1+1+1]

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