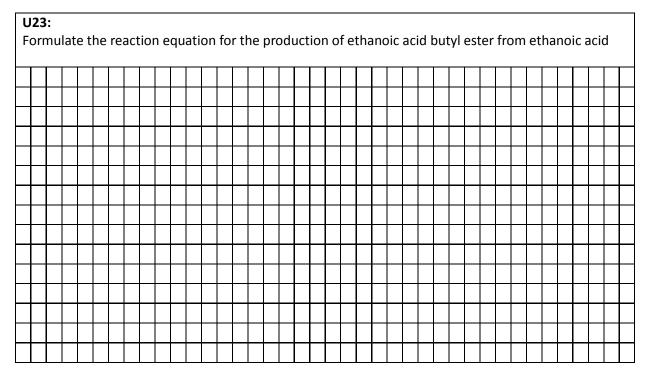
Technische Universität München Analytical Research Group PD Dr. Thomas Letzel; PD Dr. Johanna Graßmann Exam Questions – Part 1 - unbound tasks Synthesis Methods, Reaction Equations, Influencing Reactions

Questions from the "PAL Prüfungsbuch" Synthesis Methods, Reaction Equations, Influencing Reactions

All tasks are to be scored with 10 to 0 points



U28: A mixture of benzene and toluene is alkylated with CH3Cl in the presence of AlCl3 1) Formulate the equation of the reaction between benzene and chloromethane 2) Which compound will react faster with CH3Cl? Explain your answer.





Technische Universität München Analytical Research Group PD Dr. Thomas Letzel; PD Dr. Johanna Graßmann Exam Questions – Part 1 - unbound tasks Synthesis Methods, Reaction Equations, Influencing Reactions

U3	 Indicate which of the given below reactions is exothermic and which is endothermic? Describe the characteristics of both an exothermic and an endothermic reaction 													
1	Reaction:	$C + O_2 \rightarrow CO_2$	$CaCO_3 \rightarrow CaO + CO_2$											
)	Reaction type:													
2	Characteristics of an exothermic reaction:													
	_													
	_													
	Characteristics of an endothermic reaction:													
	-													





U32	
COII	nplete the following reaction equations and name all end products.
1)	$H_3C-C-O-CH_2-CH_3 + H_2O \xrightarrow{(H^+)} + $
2)	H_3C $CH-MgBr + CO_2$ H_3C H_3C H_3C $CH-COOMgBr$ H_3C $-MgBrOH$
3)	CN + 2 H₂O → +





Technische Universität München Analytical Research Group PD Dr. Thomas Letzel; PD Dr. Johanna Graßmann Exam Questions – Part 1 - unbound tasks Synthesis Methods, Reaction Equations, Influencing Reactions

For	U34: Formulate the stoichiometric reaction equation for the conversion of cyclohexanol in sulphuric acid permanganate solution																									

1	•	2	c	

Fill in the structural formula and the names of the reaction products A,B, C and D in the below shown boxes

