***Question C1.1 Match each compound (1-10) to its name (I-X, either trivial or systematic). (4 points)***

**I 7 II 2 III 8 IV 1 V 4 VI 10 VII 9 VIII 5 IX 3 X 6**

***0,4 pts for each right pair, 4 points total***

***Question C1.2***

***1, 5, 7, 8, 9, 10 yes, 2, 3, 4, 6 no***

***0,4 points for each correctly resolved molecule, 1 pt for curcling a chiral atom (multiple chiral atoms may be circled, but no achiral) 5 pts total***

***Question C1.3***

***Can absorb UV light: 1-4, 6, 8-10 Cannot: 5, 7. 0,2 points for each correctly assigned molecule, total 2 points***

11 points total

**Task C2 (39 points)**

**Thin Layer Chromatography**

***Question C2.1***



***B, D – permanganate, rest UV (hemiacetal OH group is easily oxidised, aromatic systems absorb). 0,2 points for each right answer, 1 point for nice looking TLC, total 5 points***

***Question C2.2***

***0,5 point for each well performed TLC, 0,5 point for each rightly calculated Rf (based on students TLC experiment).***

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Rf*** | ***A*** | ***B*** | ***C*** | ***D*** | ***E*** | ***F*** | ***G*** | ***H*** | ***I*** | ***J*** |
| ***IPAV*** | ***0,36*** | ***0,42*** | ***0,85*** | ***0,62*** | ***0,64*** | ***0,68*** | ***0,7*** | ***0,85*** | ***0,68*** | ***0,32*** |

***Question C2.3***

***0,5 points for each correctly calculated Rf (according to TLC), 1 point for correct decision of mobile phase –* 70% 2-propanol plus 30% ammonia*. Total 6 points.***

***Question C2.4***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***A*** | ***B*** | ***C*** | ***D*** | ***E*** | ***F*** | ***G*** | ***H*** | ***I*** | ***J*** |
| ***No*** | ***Yes*** | ***No*** | ***Yes*** | ***Yes*** | ***Yes*** | ***No*** | ***No*** | ***No*** | ***No*** |

***0,3 points for nice TLCs, 0,5 points for each right answer, total 8 points***

***Question C2.5***

***4 points for determining the the tritylated DPHA (H), 4 points for determining the DPHA (F)***

***1 pt for each well-looking TLC***

***10 points in total***

***Task total 39 pts***