Assignment On Carboxylic Acids

Abou - Tatto Fadeelah Chuze Matric No 19 musoila16 College Dept MHS/MBB3 Course Code CHM 102 1 Cive the IUPAC names of the following compounds a HCOOH - Methanoic acid b HOOCCHaCHaCHaCOOH - Perton-1, St dione acid C CH3 CH2 CH2 COOH - Butanon acid d HOg C-COQH - Ethaneolioic acid 2 CHzCHz)4COOH - Hexanoic acid P CHaCH = CH CHaCHa COOH - Hex-4-eneous acid Riscuss briefly the physical properties of carbonylic acids under the following headings i Physical appearance @ Boiling appoint @ Bolubility Anonal 3 1 - Physical apparance: All aliphatic combonitic acids up to Co are liquide at room temperature: Most other carkonylic acids are solid at room temperature although anhydrous carposytic acid Reezes to an ice-like solid below the room temperature.

is Boiling point It increases with relative mobiler news Fromatic carbonylie acids are crystallins solids and have higher melling points than their aliphatic counterpres con of comparable reloctive molecular more: is solubility house noteculeus moss carbonylic acide with up to four garken atoms in their molecules are soluble in water The water volubility decreases as their relative molecular mass incresses All carponylic acids are soluble in organic solvents 3 Write two industrial preparations of carponylic acids. a tem Carbon (11) oxide Mothernoic and is manufactured by adding (O under pressure to list agreens solution of sodium hydroxide. The free corbonylic acid is liberated by careful reaction 12504 Hosou (t NaDH -> HOONG HOSOH > HOODH + No. HSO4 from ethanol Ethanoic acid is datowined commercially by the liquid phase air-oradation of 5% solution of ethonal to ethonoric acid using manganite (11) ethanocite catalysis Ethornal Hoelf is stationed from ethylene HC=CH - Hg304 > Ethanal (CH3(80)2,Mn > CH2 COOH)

4 With equation and based explanation discuss the synthetic preparation of carbonylic acid Onidation of primary alcoholo & aldehydes can be used to prepare carbonylic acids using the usual existing agents Cie Kalason or Killacly) in acidic collection RCHOOH - COI - ROOM RCHO - COI - ROOM CHACHOOH - EDJ > CHOCHO LOJ > CHOCOOH b Hydrolysis of nitriles againsted or cotters
REN + 2 H2 0 H -> RCOUN + NHY RCOOR' + 1+20 - HT > RCOOH + R'OH COMOCHOCN + 2HOO -HT > COHOCHOCODH + NOH, CHallo CODCHATION TELLOW CHOCKOTH & CHOCK 5 With chemical equation only outline the reduction, decarbonylation and esterification of carkonyla acid Outsome And

Decerbonylation CH3CHaCHOCOONS + NOOH fose > CH3CHOCH2 +Nag(Oz C Estorification