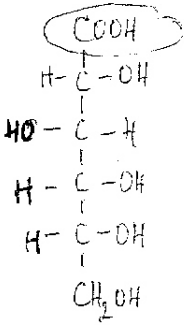
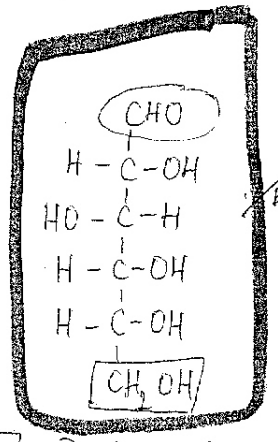
CHEM. R-CE MONOSACHARIDŮ:

① OXIDACE:



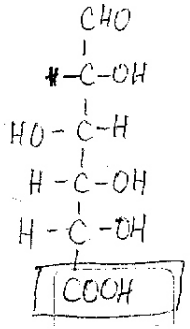
kys. D-GLUKONOVÁ
(kys. D-ALDONOVÁ)
NEMAJÍ VLASTNOSTI MONOSACH.

MÍRNÁ OXIDACE



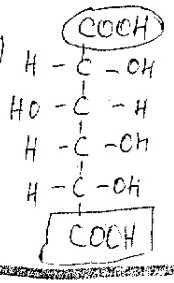
D-GLUKOSA
(D-ALDOSA)

ENZYMATICKÁ OX.



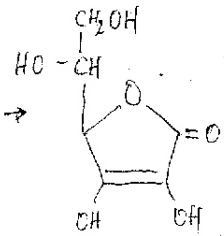
kys. D-GLUKURONOVÁ
(kys. D-ALDURONOVÁ)
v DETOX
MUKOPOLYS.

SILNÁ OX. ŽÍNIDLA (HNO_3)

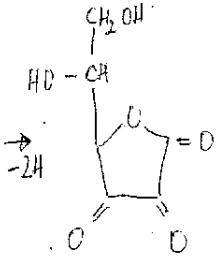


kys. GLYKAROVÁ (kys. cukerná)
(kys. D-ALDAROVÁ)

P: L-GLUKOSA → kys. L-GULONOVÁ →



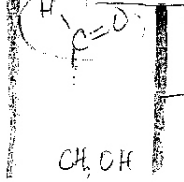
kys. L-ASKORBOVÁ (VIT. C)



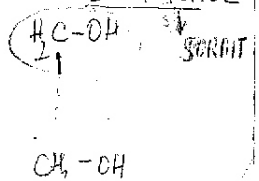
kys. L-DEHYDROASKORBOVÁ

② REDUKCE

D-ALDOSA → D-ALDITOL

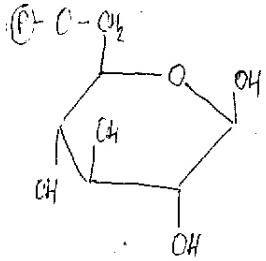


D-GLUKOSA

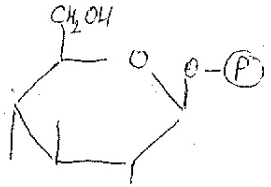


D-GLUCITOL
SORBIT

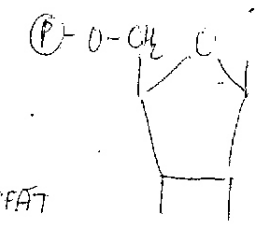
③ RCE S H_3PO_4:



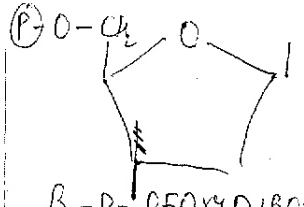
β-D-GLUKOSA-6-P
(ROBINSONŮV ESTER - CENTRUM METAB.)



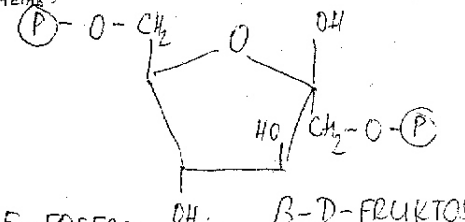
β-D-GLUKOSA-1-FOSFÁT
(CORIHO ESTER)



β-D-RIBOSA-5-FOSFÁT



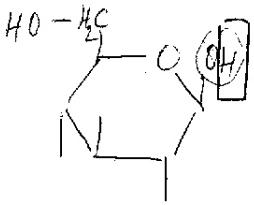
β-D-DEOXYRIBOSA-5-FOSFÁT



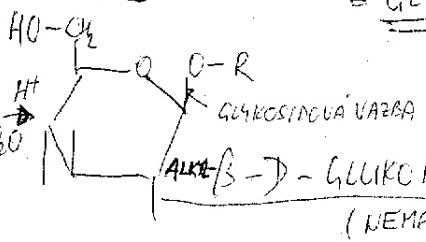
β-D-FRUKTOSA-1,6-BIS FOSFÁ

④ RCE ALKOHOLŮ S MONOSACHARIDY

(* SMÍŠENÉ ACETALY = GLYKOSIDY)



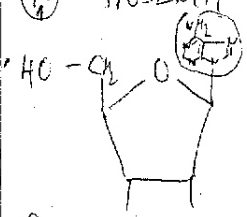
β-D-GLUKOSA



GLYKOSIDOVÁ VAZBA

ALKYL-β-D-GLUKOPYRANOSID
(NEMAJÍ RED. ČIN.)

P: SPOJENÍM SACHARIDY + DUS BÁZE (PUR. či PYRIM.) → * NUKLEOSIDY (N-GLYKOS. VAZ.)



ADENOSIN → NUKLEOSID
ADENOSIN-5-FOSFÁT → NUKLEOTID (v POLOZE 5 - MÍSTO H - P)

NUKLEOTID JE FOSF. ESTER NUKLEOSIDY

P: GLYKOSIDOVÝM SPOJENÍM SACHARIDY (* OLIGOSACHARIDY → POLYSACHARIDY)
(H → z POLOACETÁLOVÉHO HYDROXYLU)
(OH → z ALKOHOLOVÉHO HYDROXYLU 2. MONOSACH.)