**Bem.**: Copy-pasted von gene\_exploration pdf (slide 17). Darum sieht es stillistsisch unschön aus. I hope you dont mind! – Frag bei Unklarheiten!

normally: 10 one-word questions, one drawing, one fill in structure  
must know how to draw amino acids and nucleotides

example questions: either MPC or one-word answer question

1) (a molecule is shown)

a: what is the name of this molecule --- ans: tRNA

b: fill in the structure names indicated by the arrow

c: draw where mRNA would bind to this structure

d: indicate 3' and 5' ends and name what is covalently bound at the place of the circle

e: what is ghe sequence of the las three 3' nucleotides --- ans: CCA

2) Draw 3' nt of tRNA charged with N-formylmethionine

"last amino acid of tRNA is 'A' "

draw it like this: tRNA-adenine -"long bond to N-formylmethionein"-N-formylmethionine

3) write the two step reaction scheme catalyzed by aminoacyl tRNA synthetases, you can use abbrevations instead of structural formalus!

ans: aa + ATP --> aminoacyl-AMP + PP\_i

aminoacyl-AMP + tRNA --> aminoacyl-tRNA + AMP

4) what would be the peptide prodcut of translation if the mRNA is 3'-CAA(AAA)nA-5' and AAA=lys, AAC=Asn and CAA=Gln, indicate N and C terminus of the peptide

Nterm is always first in synthesis:

ans: Nterm-lys-lys-lys-...-Asn-Cterm (synthesis uf from 5' to 3')

5) name the three rRNAs in ribosomal subunits and state approx how many proteins are in each subunit. name the bacterial inition, elongation, and termination factors

ans: inition; IF1,2,3

elognation: EF-Ts, EF-Tu, EF-G

termination: RF1,2,3

rRNA molecues: 16S small, 23S big, 5S

6) fill in the names indicated by the empty sqaures, Which is the catalytic reside in the ribosome (ribosome shown)?

7) how is this stage of translation called? fill in the names indicated by equestion marks (There are more than 15 question marks)

ans: initation of translation and filled in names