Answers to the exam

1. C. Not A because variance is not measured in % (volatility is).
2. B. Not C because these are monthly volatilities and you had to calculate yearly ones. . Note that the returns are monthly, so you get monthly volatilities 3.30% and 2.39%, and then annualize them to annual volatility: 11.4% and 8.3%
3. D. 23. 66.72/(12-1) = 6.06 Not B because covariance is not measured in % (correlation is).
4. C. Note that the covariance computed in Q3 is at monthly level, so you have to use the monthly volatilities in the formula =0.77
5. B.. Var(Rp) = 0.5^2*0.114^2+0.5^2*0.083^2 + 2*0.5*0.5*0.77*0.114*0.083 = 0.0086. SD(Rp) = 9.3%
6. D.
7. A.
8. C.
9. B. Portfolio weights are -0,25 and 1,25, then the usual variance-of-portfolio formula.
10. D. Unleveraged portfolio return is 45*0,3 + 25*0,7=31%. So you receive that amount on your original 10 000 and receive 25% (=31-6%) on the borrowed 10 000, so total of 56%.
11. A. Volatility of the unleveraged portfolio is 15,7%, so on the twice leveraged portfolio the volatility is double that, so 31,4%.
12. A.
13. C.
14. D.
15. D.
16. B.
17. B.
18. A.
19. C.
20. A.
21. D.