Full name and signature: ______________ ______________	
Date of birth (day/month/year): ________ Today is (day/month/year): ________	
Official email address: ______________	

Grading Policy: Good=+2, Wrong=−1, Missing=0

1. Given the risk premium π and the random payoff X, assume we approximate the utility u, with the two Taylor expansions:

$$u(\mathbb{E}X - \pi(X)) \approx u(\mathbb{E}X) - u'(\mathbb{E}X)\pi(X)$$
$$u(X) \approx u(\mathbb{E}X) + u'(\mathbb{E}X)(X - \mathbb{E}X) + \frac{1}{2}u''(\mathbb{E}X)(X - \mathbb{E}X)^2$$

   What is wrong with the approximations above? The calculation/application of:
   - A. The utility function.
   - B. The expected value.
   - C. The expansion itself.

2. Let $\bar{r}$ be the vector of portfolio expected returns and $\mathbf{S}$ its covariance matrix. Set:

$$a = \bar{r}'\mathbf{S}^{-1}\bar{r}$$
$$b = \bar{r}'\mathbf{S}^{-1}\mathbf{1}$$
$$c = \mathbf{1}'\mathbf{S}^{-1}\mathbf{1}$$
$$d = ac - b^2$$

   Which of the following is correct:
   - A. $a(-b^2 + ac) \geq 0$
   - B. $a(-b^2 + ac) > 0$
   - C. $a(-b^2 + ac) < 0$

3. Prudential regulation:
   - A. Imposes maximum levels of risk and minimal levels of capital buffer.
   - B. Imposes minimal levels of capital buffer, adequate to risks taken.
   - C. Imposes minimal levels of capital buffer, given the riskiness of credit exposures.

4. The monetary base:
   - A. Is formed by the central bank's assets.
   - B. Consists of the currency in circulation and bank reserves.
   - C. Is given by vault cash and central bank reserves.

5. Shadow banking refers to:
   - A. Non-bank intermediaries providing services similar to traditional commercial banks.
   - B. Non-bank intermediaries financing retail products manufactured by their parent companies.
   - C. Non-bank intermediaries targeting borrowers not creditworthy for banks, at higher rates.

6. In regard to Common Equity Tier 1 (CET 1), which of the following is wrong:
   - A. CET 1 instruments have no maturity date, no right to be redeemed, and no specified coupon.
   - B. CET 1 instruments represents the less subordinated (most senior) claims.
   - C. CET 1 instruments distributions (e.g. dividends) are wholly discretionary.

7. The Liquidity Coverage ratio:
   - A. Ensures that Tier 1 capital is sufficient to survive a serious one-month stress.
   - B. Is based on the ratio of high-quality liquid assets to projected net outflows.
   - C. Is based on the ratio of high-quality liquid assets to projected net funding.

8. In regard to Capital Conservation Buffer, which of the following is wrong:
   - A. Institutions not meeting buffer requirements are limited in their distributions.
   - B. The buffer consists of CET 1 and Additional Tier 1 instruments.
   - C. The buffer consists only of CET 1 instruments.

9. Level 1 assets (used to calculate the Liquidity Coverage ratio) *do not* include:
   - A. Cash.
   - B. Central bank reserves that can be drawn down in times of stress.
   - C. Corporate bonds.