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Your grade is: 5 (Good: 4, Wrong: 3)

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

1. **(B)** 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. **(NIL)** 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. **(B)** 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. **(A)** 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. **(A)** 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. **(B)** 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. **(NIL)** 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. **(A)** 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. **(C)** 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.**