Final Exam (Answer Key)

Course: Money and Banking

Course Code: ECO 223

Total points: 30

Weightage towards final grade: 30%

Date: 04/05/2024

Time: 2:30 PM - 3:45 PM

Name: _____   Roll No. _____

1. (C)

2. (D)

3. (D)

4. (D)

5. (A)

6. (C)

7. (D)

8. (C)

9. (C)

10. (B)

11. (C)

12. (C)

13. (D)

14. (D)

15. (D)

16. 0.16%

17. (D)

18. r

19. (D)

20. (A)

Section I

Total: _____

21. $X_A > X_B$

22. (A)

23. (B)

24. (C)

Section II=

Total: _____

Section I Total: _____ **+ Section II Total:** _____

= _____

Final Exam for ECO 223 (Detailed Solutions)

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Section I

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1. When borrowed reserves increase, money supply increases. The precise reason is?

   (A) More cash flow   (B) More MB for consumers

   (C) More MB for deposit creation

   (D) Higher value of bonds in the financial markets.

   Answer. (C). Directly from your slides.

2. $c(M, MB, r, e) =$

   (a) $\frac{MB + M(r+e)}{M - MB}$ (b) $\frac{MB - M(r+e)}{M + MB}$ (c) $\frac{MB - M(r-e)}{M - MB}$ (d) $\frac{MB - M(r+e)}{M - MB}$

   Answer. (D). Need to solve $M = \frac{1+c}{r+e+c} \times MB$

3. The cost of holding excess reserves is

   (A) There's no cost, the more the better   (B) Too high to ever hold any

   (C) Pareto optimal   (D) An opportunity cost.

   Answer. (D). Here, the opportunity cost is the the interest rate that could have been earned on lending these reserves out.

4. In equilibrium, if $i_d > i_{ff} > i_{or}$, Quantity of reserves R is given by (assume $NBR > 0$)

(A) $R = BR$ (B) $R > NBR$ (C) $R < BR$ (D) $R = NBR$

Answer. (D) $R = NBR$

5. An assumption of Gordon's growth model is

   (A) $k_e > g$ (B) $k_e > D_0$ (C) $k_e < D_1$ (D) $D_2 \neq D_3$

   Answer. (A) The growth rate is assumed to be less than the required return on equity

6. A key difference between Keynes and QTM is

   (A) Transactions demand for money.   (B) Precautionary demand for money.

   (C) Speculative demand for money.   (D) Something else.

   Answer. (C) Speculative Demand introduced that people also hold money keeping in mind financial investments

7. The statement of the law of one price states that the prices of an identical good should be the same throughout the world if?

   (A) There is no recession   (B) There is no hyperinflation

   (C) There is a floating exchange rate   (D) trade barriers are low

   Answer. (D) Trade barriers are low, by definition.

8. Stock market bubbles may come from

   (A) Irrational investor theory.   (B) The theory of cognitive investment.

   (C) Social contagion   (D) None of the above

   Answer. (C) Stock market bubbles may be explained by overconfidence and social contagion

9. _____ is done to reduce the problem of adverse selection by banks and other financial institutions

   (A) Signalling   (B) Moral Hazard.   (C) Screening.   (D) Risk aversion.

   Answer. (C) Screening. The process of using available information and trying to collect more if possible.

10. The rise of asset prices above their fundamental economic values is an

    (A) Asset value expansion   (B) Asset-price bubble   (C) Asset hyperinflation

    (D) None of the above

    Answer. (B) By definition.

11. Net change in government international reserves is a sum of

    (A) Revenue and Cost accounts   (B) Bond and revenue accounts

    (C) Current and capital accounts   (D) None of the above.

    Answer. (C) By definition.

12. Which of these measures is particularly important both in "real" and "nominal" terms

    (A) GDP (PPP).   (B) Unemployment (per capita)   (C) Foreign Exchange Rate.

    (D) Nothing is particularly important in nominal terms

    Answer. (C) Even in nominal terms it is important as international trade takes place on those exchange rates (regardless of the PPP adjustment)

13. Which of these is not an advantage of open market operations for the central bank

    (A) Complete control over volume   (B) Flexible and precise   (C) Easily reversed

    (D) Not directly affecting monetary base.

Answer. (D) It does indeed, directly affect the monetary base. In fact, that in itself is an advantage

14. In QTM, if $\pi = 10\%$ and $\%\Delta M = 8\%$, we can conclude that $x = 2\%$ where x is

    (A) $\%\Delta P$ (B) $\%\Delta V$ (C) $\%\Delta Y$ (D) None of the above

    Answer. (D) None of the above. If $\pi = 8\%$ and $\%\Delta M = 10\%$, it would have been $\%\Delta Y$, but here, $\%\Delta Y$ is -2%

15. In emerging markets, deterioration of bank balance sheets triggers a/an

    (A) Employment crisis   (B) Production crises

    (C) Debt crisis   (D) Currency crisis

    Answer. (D) By definition

16. In Gordon's growth model, if $P_0 = ₹5000$, $D_1 = ₹2$, $g = 0.8k_e$, $g = $_____%.

    Answer. Solving yields $k_e = 0.002$, and $g = 0.0016$ or 0.16%.

17. Which is the statistical measure about a portfolio is irrelevant to risk neutral investor (from the following).

    (A) Variance   (B) Median   (C) Skewness   (D) All of the above.

    Answer. (D). The risk neutral investor is only concerned with mean.

18. Out of r, e and c, which can be thought of as a policy decision?

    Answer. r. This is a choice for the central bank.

19. _____ is increasingly viewed as the most important goal for monetary policy.

    (A) Controlling unemployment.   (B) Controlling growth

    (C) Interest rate stability   (D) Price stability.

Answer. (D). This is something we discussed in class.

20. Which of these factors causes the exchange rate to appreciate? (All options imply "relative to other countries")

    (A) Fall in domestic price level   (B) Fall in productivity

    (C) Increase in import demand   (D) The above all cause appreciation.

    Answer. (A). Have discussed in detail in class. See slides.

Section II

21. Consider two assets with uncertain returns, $i \in \{A, B\}$. A **risk averse** agent has been asked to pick one for free at time t (i.e., $P^t = 0$), but has to take whatever returns they get and $t + 1$. $P_i^{t+1} = X_i + \epsilon$, where $\epsilon \sim U[-2, 2]$. What is the condition that will make the agent always choose A over B

    Answer. This is very very easy. $X_A > X_B$. Since both assets have same level of uncertainty (i.e., same ϵ), the fact that the agent is risk averse will make no difference. It would be the same for a risk neutral or risk loving agent too. Just Saying $E(X_A) > E(X_B)$ won't be correct though, as for a risk averse agent it is not only expectation that matters. In this instance, the specific and correct answer is $X_A > X_B$

22. In class I referred to a term often used in economics:"costly signals". In a financial markets, where information asymmetries are seen everywhere, a costly signal can sometimes help in

    (A) Screening   (B) Cheap Talk (Also an economics term I have used in class).

    (C) Better understanding interest rates.   (D) Time-consistent decisions

Answer. (A) It can help with screening. For example, a good credit score (maintaining this is costly) gives good signals about credit worthiness.

23. Consider he following money supply equation:

$$M^S = c_0 + c_1 Y - c_2 r$$

If M^S is money supply and market is in equilibrium, given your understanding of Y and r, which of the following coefficients represents transactions money demand?

(A) c_0 (B) c_1 (C) c_2 (D) None of the above

Answer. (B), c_1. It shows the relationship between money demand and income, which is typically positive and associated with transactions demand. The association with interest is opposite, as represented by c_2. Precautionary is c_0, and is held by the agent for emergencies.

24. Let us say you are privy to some huge news: a 'demonotization' policy is going to be announced tonight at 12:00 AM, and no one knows except you and 3 policy makers (I have no idea how you found out). It becomes obvious to you that shares of any firm that offers cashless payment (like mobile wallets) will rise after the announcement. You buy 100 shares, and gain immensely in the future. Which of the following is true?

(A) This example shows a failure of efficient market hypothesis

(B) Such instances of luck are too small to disprove the efficient market hypothesis, which generally holds true

(C) This situation is actually not inconsistent with efficient market hypothesis.

(D) This has nothing to do with efficient market hypothesis.

Answer. (C) This situation is actually not inconsistent with efficient market hypothesis. Since this information is private and only a few people have it, efficient market

hypothesis does not say anything about its pricing.

Rough Work