ECO 223 – Winter 2023 Quiz 2

Date: 29th March, 2023 Total Marks – 15

Weightage Towards Final Grade – 15% Time: 20 Minutes

Name: _____ Roll Number: _____

a. Each Question is worth 1.5 points. Wrong answers are -0.75 (negative marking), no answers are 0 points.
b. Please circle the right answer. Each question has **ONLY ONE** right answer.

Answer the following questions:

1. Yield to maturity ratio (YTM) of a 0 coupon bond sold well below face value is
   a. Less that the coupon rate
   b. More than the coupon rate
   c. Equal to the coupon rate
   d. Unrelated to the coupon rate.
   e. None of the above.
2. Consider the following cashflow stream:

$$\$8000 = \frac{\$1000}{1+r} + \frac{\$1000}{(1+r)^2} + \frac{\$1000}{(1+r)^3} + \frac{\$1000}{(1+r)^4} + \frac{\$1000}{(1+r)^5} + \frac{\$10000}{(1+r)^5}$$

   Find r
   a. 0.100
   b. 0.092
   c. 0.068
   d. 0.161
3. YTM of a simple loan is given by (you can easily figure it out)
   a. $r = 1 + \sqrt[n]{\frac{Money\ PaidBack}{Money\ Borrowed}}$
   b. $r = 1 - \sqrt[n]{\frac{Money\ PaidBack}{Money\ Borrowed}}$
   c. $r = 1 - \sqrt[n]{\frac{Money\ Borrowed}{Money\ Paid\ Back}}$
   d. $r = 1 + \sqrt[n]{\frac{Money\ Borrowed}{Money\ Paid\ Back}}$
   e. None of the above.

For 3., marks to be given to everyone since option e. was missing in the question paper.

4. Consider a perpetuity with payment of C in every period. Also consider an interest rate i. The cashflow is given by
   a. C, C, C, C ….
   b. $\frac{C}{1+i} + \frac{C}{(1+i)^2} + \frac{C}{(1+i)^3} + \cdots$
   c. $\frac{C}{1+i}, \frac{C}{(1+i)^2}, \frac{C}{(1+i)^3}, \ldots$
   d. $\frac{i}{C}$
   e. None of the above.

5. If price of a perpetuity is $2242 and the YTM is 0.05, the annual payment is? (No options but negative marking still holds)

   $112.1

6. During a period of real business cycle expansion, which if the following is true for bonds (demand supply model)?
   a. Increase in both interest and Price.
   b. Decrease in both interest and price.
   c. Increase in one and decrease in the other.
   d. Can be a., b. or c.
7. An increase in the money supply leads to a rise in interest rates in response to the higher level of income. This is known as:
   a. Money Effect.
   b. Level Effect.
   c. Price Effect.
   d. Income Effect.
   e. Can be any of the above.
8. As the interest rate on bonds, i, rises
   a. The opportunity cost of buying bonds rises
   b. The opportunity cost of holding money falls
   c. Holding money is less desirable.
   d. None of the above.
9. Consider a market with only 2 assets A and B. The risk of both assets increase but the risk of A increases more than B. Their expected returns remain the same (as do risk and returns of all other assets). For a risk loving investor,
   a. Their demand for asset A increases relative to B.
   b. Their demand for asset B increases relative to A.
   c. Their demand for both assets remain unchanged.
   d. Can't say.
10. The spread between the interest rates on bonds with default risk and default-free bonds, called the
    a. Interest Premium.
    b. Risk Premium.
    c. Default Premium.
    d. Returns Premium.