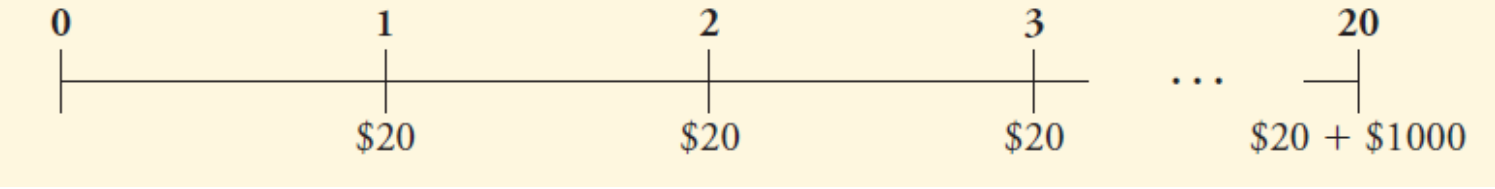
Q1

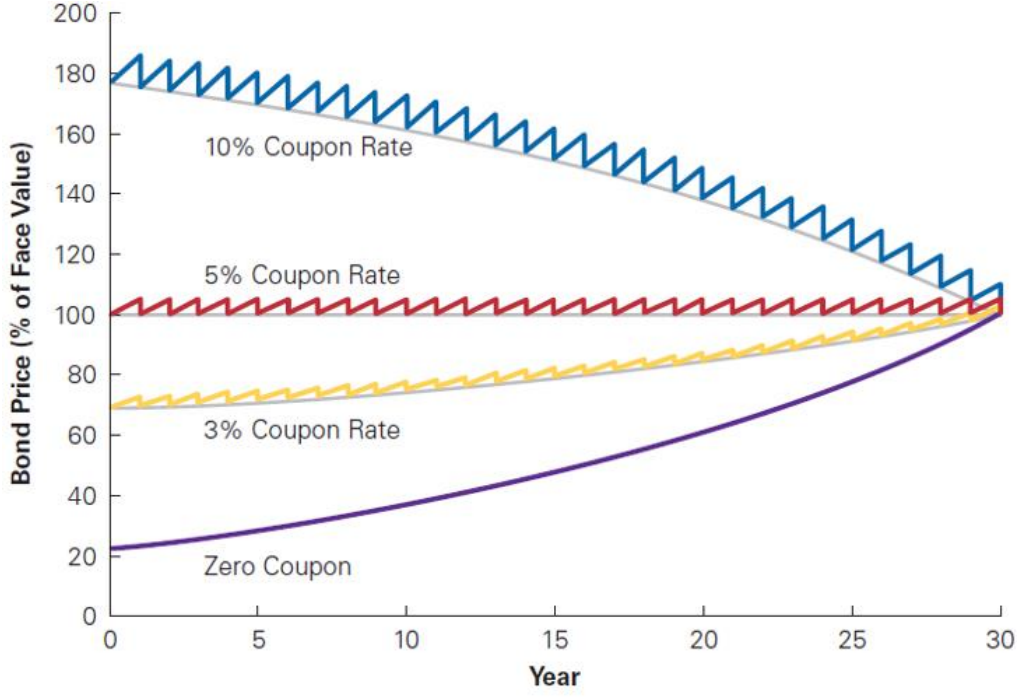
Assume that a bond will make payments every six months as shown on the following timeline (using six-month periods). Which of the following statements is true about the bond?



- **The face value is $20 ✗ $1000**
- **The maturity of the bond is 20 years ✗ 10 years**
- **The coupon rate is 2% ✗ 4%APR**
- **The yield to maturity cannot be determined ✓ It is determined by the market**

Q2

If below is the curves between risk-free 30-year bond price and time, which is closest to the interest rate if it does not change through the 30 years?



5%

- **5% coupon rate bond is sold at par**

Q3

If the interest rate is 0, how is the yield to maturity of a risk-free bond

=0, by definition of interest rate

Q4

If the interest rate is 0, how is the yield to maturity of a risky bond which is believed to have 20% likelihood of default? In particular, the bond owners expect that they will be compensated for nothing if the bond is defaulted.

>25%

- **Expected payment is 80% of Face Value**
- **Price is less than 80% due to requirements for risk premium**
- **YTM>1/80%-1=25%**