INSTITUTE OF ACTUARIAL & QUANTITATIVE STUDIES

Subject: Fixed Income Products

Chapter: Unit 1

Category: Practice questions solutions

1. C is correct. If a bond's price is higher than its par value, the bond is trading at a premium. A is incorrect because a bond is trading at par if its price is equal to its par value. B is incorrect because a bond is trading at a discount if its price is lower than its par value.

2. C is correct. A currency option bond gives bondholders the right to choose the currency in which they want to receive each interest payment and principal repayment. A is incorrect because a pure discount bond is issued at a discount to par value and redeemed at par. B is incorrect because a dual-currency bond makes coupon payments in one currency and pays the par value at maturity in another currency.

3. A is correct. The contract between a bond issuer and the bondholders is very often called an indenture or deed trust. The indenture documents the terms of the issue, including the principal amount, the coupon rate, and the payments schedule. It also provides information about the funding sources for the contractual payments and specifies whether there are any collateral, credit enhancement, or covenants. B is incorrect because a debenture is a type of bond. C is incorrect because a letter of credit is an external credit enhancement.

4. B is correct. The source of payment for bonds issued by supranational organizations is either the repayment of previous loans made by the organization or the paid-in capital of its member states. A is incorrect because national governments rely on their taxing authority and money creation to repay their debt. C is incorrect because non-sovereign bonds are typically repaid from the issuer's taxing authority or the cash flows of the project being financed.

5. B is correct. Affirmative covenants indicate what the issuer "must do" and are administrative in nature. A covenant requiring the issuer to insure and perform periodic maintenance on financed assets is an example of affirmative covenant. A and C are incorrect because they are negative covenants; they indicate what the issuer cannot do.

6. A bond issued by Sony from Japan, denominated in US dollars but not registered with the SEC, is an example of a Eurobond.

A Eurobond is a bond that is issued internationally, outside the jurisdiction of any single country. The global bond markets consist of national bond markets and the Eurobond market.

1. A **national bond** market includes all the bonds that are issued and traded in a specific country, and denominated in the currency of that country. Bonds issued by entities that are incorporated in that country are called domestic bonds, whereas bonds issued by entities that are incorporated in another country are called foreign bonds.

7. The original issue discount tax provision requires the investor to include a prorated portion of the original issue discount in his taxable income every tax year until maturity. The original issue discount

is the difference between the par value and the original issue price—that is, Z1,000 – Z800 = Z200. The bond's maturity is 10 years. Thus, the prorated portion that must be included each year is Z200 ÷ 10 = Z20. The original issue discount tax provision allows the investor to increase his cost basis in the bond so that when the bond matures, the investor faces no capital gain or loss.

8. C is correct. The coupon rate on an inverse FRN has an inverse relationship to the reference rate. Thus, an inverse FRN does not offer protection to the investor when market interest rates increase but when they decrease. A and B are incorrect because step-up bonds and FRNs both offer protection against increases in market interest rates.

9.

1: A is correct. The bonds were issued in 2012 and are first callable in 2022. The call protection period is 2022 – 2012 = 10 years.

2: B is correct. The call prices are stated as a percentage of par. The call price in 2026 is $1,023.22 (102.322% × $1,000). The call premium is the amount paid above par by the issuer. The call premium in 2026 is $23.22 ($1,023.22 – $1,000).

3: A is correct. The bond is callable every 15 August from 2022—that is, on specified dates following the call protection period. Thus, the embedded option is a Bermuda call.

10. C is correct. Money market securities are issued with a maturity at issuance (original maturity) ranging from overnight to one year. A is incorrect because securitization does not relate to a bond's maturity but to the process that transforms private transactions between borrowers and lenders into securities traded in public markets. B is incorrect because capital market securities are issued with an original maturity longer than one year.

11. Primary bond markets are markets in which issuers first sell bonds to investors to raise capital.

A bond issue can be sold via a public offering (or public offer), in which any member of the public may buy the bonds, or via a private placement, in which only a selected group of investors may buy the bonds.

12. C is correct. Corporate bonds typically settle on a T + 3 basis - that is, three days after the transaction date. A is incorrect because cash settlement occurs for some government and quasi-government bonds and for many money market trades. B is incorrect because settlement on a T + 1 basis is typical for government, not corporate, bonds.

13. B is correct. Most bonds issued by national governments with a maturity at issuance (original maturity) shorter than one year are zero-coupon bonds. A and C are incorrect because fl oating-rate bonds and coupon-bearing bonds are typically types of sovereign bonds with maturities longer than one year.

14. C is correct. Companies use commercial paper as a source of funding working capital and seasonal demand for cash, as well as an interim source of financing until permanent financing can be arranged.

15. A repurchase agreement or repo is the sale of a security with a simultaneous agreement by the seller to buy the same security back from the purchaser at an agreed-on price and future date. In practical terms, a repurchase agreement can be viewed as a collateralized loan in which the security sold and subsequently repurchased represents the collateral posted. One party is borrowing money and providing collateral for the loan at an interest rate that is typically lower than on an otherwise similar bank loan. The other party is lending money while accepting a security as collateral for the loan. Repurchase agreements are a common source of money market funding for dealer firms in many countries. An active market in repurchase agreements underpins every liquid bond market. Financial and non-financial companies participate actively in the market as both sellers and buyers of collateral, depending on their circumstances. Central banks are also active users of repurchase agreements in their daily open market operations; they either lend to the market to increase the supply of funds or withdraw surplus funds from the market.