08.12 Conceptual and Analytical Short Questions

1. Define Security Valuation.
2. Discuss the basic elements of Security Valuation.
3. Discuss about Basic Valuation Model.
4. Write Short Notes: Liquidation Value; Going Concern Value; Book Value; Market Value; Intrinsic Value; Face/Par Value; Replacement Value; Present Value.
5. Distinguishes between the following concepts:
   (a) Liquidation Value versus Going Concern Value.
   (b) Book Value versus Face Value.
   (c) Market Value Verses Intrinsic Value.
6. Discuss the Advantage/Importance/ Necessity/ Cases of Security Valuation.
7. What do you mean by Bond Valuation?
8. What do you mean by Preferred Stock Valuation?
9. What do you mean by common Stock Valuation?
10. What is Dividend Discount Model (DDM)? Explain.

08.13 Numerical Questions/ Exercise

Exercise- 01

Mr. Maruf has bought common stock of Mak Real Estate Ltd. The expected dividend at the end of the year is Tk. 26 and market price is Tk. 265. If the expected return of the stock is 12%, what is the value of the stock?

Exercise- 02

Mr. Mahfuz has bought common stock of Mark Real Estate Ltd. The expected dividend at the end of the year is Tk. 32 and market price is Tk. 280. If the expected return of the stock is 14%, what is the value of the stock?

Exercise- 03

Mr. Mahfuz is planning to buy a share for one year. He expects dividend of Tk. 25 next year from the share. If he would sell the share at Tk. 185 at the end of the year, when the required rate of return is 12%, what is the value of the share?

Exercise- 04

Mr. Mahmud is planning to buy a share for one year. He expects dividend of Tk. 20 next year from the share. If he would sell the share at Tk. 180 at the end of the year, when the required rate of return is 11%, what is the value of the share?

Exercise- 05

Mrs. Munira has purchased a common stock from Alif and Company. The expected dividends from the stock are Tk. 24, 26, 27, 32 & 35 per year respectively and at the end of 5 years the market value would be expected Tk. 320. If discount rate is 12%, what is the value of the common stock?

Exercise- 06

Mrs. Mowya has purchased a common stock from Alif and Company. The expected dividends from the stock are Tk. 22, 24, 28, 34 & 36 per year respectively and at the end of 5 years the market value would be expected Tk. 280. If discount rate is 13%, what is the value of the common stock?

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Exercise- 07

Mr. Alamin has purchased a common stock of City Shoe Company Ltd. The company pays dividend Tk. 32 per year. When the growth rate is 5% and discount rate is 12%, what is the value of the stock?

Exercise- 08

Mr. Razib has purchased a common stock of Knight Shoe Company Ltd. The company pays dividend Tk. 30 per year. When the growth rate is 4% and discount rate is 12.5%, what is the value of the stock?

Exercise- 09

ECI Ltd. is expecting to pay a dividend of Tk. 25 per share next year. The dividends are expected to grow constantly at the rate of 5%. If the cost of capital is 14%, what is the present value of the share?

Exercise- 10

KLM Ltd. is expecting to pay a dividend of Tk. 35 per share next year. The dividends are expected to grow constantly at the rate of 4%. If the cost of capital is 15%, what is the present value of the share?

Exercise- 11

Amlam Sea Foods Ltd's pay out ratio is 60%; the cost of capital is 13%. If the expected earnings per share are Tk. 25 and growth rate of dividend is 6%. Calculate the value of share?

Exercise- 12

Aslam Sea Foods Ltd's pay out ratio is 60%; the cost of capital is 14%. If the expected earnings per share are Tk. 30 and growth rate of dividend is 5%. Calculate the value of share?

Exercise- 13

As a financial manager of a finance company you are calculating the potential purchase of a business currently generating Tk. 20,000 after tax cash flows (Do). Based on a review of same risk investment opportunities, you must earn 14% rate of return. You have decided to calculate the firm value, when the expected growth rate is as follows, what is the value of the firms-

(i) 6% to infinity?
(ii) Zero percent to infinity?
(iii) 4% for the first 4 year followed by a constant annual rate of 5% from year 5 to infinity?

Exercise- 14

As a financial manager of a finance company you are calculating the potential purchase of a business currently generating Tk. 25,000 after tax cash flows (Do). Based on a review of same risk investment opportunities, you must earn 12% rate of return. You have decided to calculate the firm value, when the expected growth rate is as follows, what is the value of the firms-

(i) 5% to infinity?
(ii) Zero percent to infinity?
(iii) 3% for the first 4 year followed by a constant annual rate of 4% from year 5 to infinity?

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Exercise- 15

Satun Corporation Ltd. paid the following dividends over the last 5 years:

Years	1	2	3	4	5
Dividend	15	18	20	23	25

The Company is thinking to provide Tk. 27 dividend per share in next year.

(i) If the required rate of return is 14%, what is the value of the share?

(ii) If the required rate of return is 15%, what is the value of the share?

Exercise- 16

Shakha Corporation Ltd. paid the following dividends over the last 5 years:

Years	1	2	3	4	5
Dividend	16	24	26	28	32

The Company is thinking to provide Tk. 34 dividend per share in next year.

(i) If the required rate of return is 14%, what is the value of the share?

(ii) If the required rate of return is 12%, what is the value of the share?

Exercise- 17

Determine the price of a share of Euro-Cola Company from the information given below: The current dividend is given as Tk. 4, growth rate of dividend for first 3 years is 4%, growth rate of dividend for next 4 years is 5%, perpetual growth rate is 6%, and discount rate is 14%.

Exercise- 18

Determine the price of a share of Asa-Cola Company from the information given below: The current dividend is given as Tk. 3, growth rate of dividend for first 4 years is 6%, growth rate of dividend for next 3 years is 7%, perpetual growth rate is 5%, and discount rate is 15%.

Exercise- 19

Shun Cement Ltd's annual dividend is Tk. 25 per share and the firm's required rate of return is 14%. Find out the market price of the shares if:

(i) Dividend is expected to grow at 7% for 5 years followed by 5% Constant growth rate from year 6 to infinity.

(ii) Dividends are expected to grow at 8% for 4 years followed by 7%, constant growth rate from year 5 to infinity.

Exercise- 20

Shan Cement Ltd's annual dividend is Tk. 30 per share and the firm's required rate of return is 12%. Find out the market price of the shares if:

(i) Dividend is expected to grow at 5% for 5 years followed by 6% Constant growth rate from year 6 to infinity.

(ii) Dividends are expected to grow at 6% for 4 years followed by 7%, constant growth rate from year 5 to infinity.

Exercise- 21

Uttam Finance Ltd. is considering a cash purchase of the stock of Rata Shoes Ltd. During the year just completed, Rata Shoes Ltd. earned Tk. 60 per share and paid Tk. 36 dividend per share. The company's dividend grows at 10% per year for next 5 years, then at 8% for next 3 years & at % per year for infinity. If required rate is 14%, what will be the value of share?

Exercise- 22
Uttaran Finance Ltd. is considering a cash purchase of the stock of Bala Shoes Ltd. During the year just completed, Bala Shoes Ltd. earned Tk. 50 per share and paid Tk. 30 dividend per share. The company's dividend grows at 5% per year for next 5 years, then at 6% for next 3 years & at 7% per year for infinity. If required rate is 12%, what will be the value of share?

Exercise- 23
Mr. Farid Hossain has purchased a common stock of Ronya Electronic Ltd. The company pays Tk. 28 as a dividend per year without growth rate. If the discount rate is 13.5%, what is the value of the stock?

Exercise- 24
Mr. Maruf Hossain has purchased a common stock of Monya Electronic Ltd. The company pays Tk. 32 as a dividend per year without growth rate. If the discount rate is 14.25%, what is the value of the stock?

Exercise- 25
SAT Industry has a face value per share is Tk. 100. Its return on equity is 12% and it follows a policy of retaining 60% of its earnings. If the cost of capital is 14%, what would be the value of the share?

Exercise- 26
MAX Industry has a face value per share is Tk. 100. Its return on equity is 15% and it follows a policy of retaining 65% of its earnings. If the cost of capital is 15%, what would be the value of the share?

Exercise- 27
ABC Company pays a dividend of the Tk. 15 per share. Company's growth rate is zero percent. If the cost of equity is 13%, what will be the present value of the share?

Exercise- 28
P&Q Company pays a dividend of the Tk. 16 per share. Company's growth rate is zero percent. If the cost of equity is 12%, what will be the present value of the share?

Exercise- 29
Mrs. Sufia Begum has purchased a preferred stock of Remax Company for 12 years. The face value of the stock is Tk. 2,000 at the rate of 16% dividend. If the required rate is 13%, what is the present value of the stock?

Exercise- 30
Mrs. Shahana Parvin has purchased a preferred stock of Omax Company for 15 years. The face value of the stock is Tk. 1,000 at the rate of 17% dividend. If the required rate is 12.5%, what is the present value of the stock?

Exercise- 31
Mr. Nazibur is planning to purchase a preferred share having a maturity period of 10 years. Face value of the stock is Tk. 1000 and dividend rate is 12%, when the expected rate of return is 9%, calculate the value of the share.

Exercise- 32

Mr. Nazrul is planning to purchase a preferred share having a maturity period of 8 years. Face value of the stock is Tk. 1000 and dividend rate is 15%, when the expected rate of return is 12%, calculate the value of the share.

Exercise- 33

Mr. Azizur Rahman is considering purchasing a preferred stock of Alex Leather Ltd. having maturity period of 5 years. The face value of the stock is Tk.100 and dividend rate is 12%. If the cost of capital is 15%, what is value of the stock?

Exercise- 34

Mrs. Meem has purchased a perpetual preferred stock from Rona Electronic Ltd. The face value of the stock is Tk. 1,000 at the rate of 16% dividend. If the expected rate return is 11%, what is the value of the stock?

Exercise- 35

Mrs. Sadia has purchased a perpetual preferred stock from Bona Electronic Ltd. The face value of the stock is Tk. 5,000 at the rate of 15% dividend. If the expected rate return is 12%, what is the value of the stock?

Exercise- 36

Mutual Trust Company has Tk. 1000 perpetual preferred stock on which it pays a dividend of Tk. 10%. Assume that this type of preferred stock is currently yielded 12% dividend. What is the value of the stock?

Exercise- 37

A Trading Corporation is planning to evaluate the value of its outstanding preferred share having Tk. 1000 par value and paying Tk. 120 dividend per share, similar risk preferred shares are currently earning at the rate of 9% return.

(i) What is the value of the outstanding preferred stock?

(ii) If an investor buys the preferred stock at the value estimated above in condition (i), how much would be gained or loosed per share if he sells the share when the required rate is 11%? Explain.

Exercise- 38

ABC Trading Corporation is planning to evaluate the value of its outstanding preferred share having Tk. 100 par value and paying Tk. 15 dividend per share, similar risk preferred shares are currently earning at the rate of 10% return.

i) What is the value of the outstanding preferred stock?

i) If an investor buys the preferred stock at the value estimated above in condition (i), how much would be gained or loosed per share if he sells the share when the required rate is 12%? Explain.

xercise- 39

eetul Electronic Ltd. is planning to pay earnings per share (EPS) of Tk. 30 and dividend payout io is 40% on its common stock. An investor requires a 12% return on the investment. The wth rate is 5%. What is the value of the stock?

Exercise- 40

Seetul Electronic Ltd. is planning to pay earnings per share (EPS) of Tk. 25 and dividend payout ratio is 45% on its common stock. An investor requires a 13% return on the investment. The growth rate is 4%. What is the value of the stock?

Exercise- 41

Simger Bangladesh Ltd. is a mature firm in electrical industries of Bangladesh. The Company recently paid Tk. 36 as a divided per share. For its maturity as well as constant sales and earnings the management of the firm feels that the dividend will remain at the current level for the foreseeable future.

(i) If the cost of capital is 16%, what is the value of the stock?

(ii) When the firms risk as perceived by market participants suddenly increase for that reasons cost of capital raise to 17%, what is the value of the stock?

Exercise- 42

Sissior Bangladesh Ltd. is a mature firm in electrical industries of Bangladesh. The Company recently paid Tk. 32 as a divided per share. For its maturity as well as constant sales and earnings the management of the firm feels that the dividend will remain at the current level for the foreseeable future.

(i) If the cost of capital is 15%, what is the value of the stock?

(ii) When the firms risk as perceived by market participants suddenly increase for that reasons cost of capital raise to 16%, what is the value of the stock?

Exercise- 43

Suppose that you are interested in buying the stock of a company that has a policy of paying a $ 6 per share dividend every year. Assuming no changes in the firm's policies, what is the value of a share of stock if the required rate of return is 11 percent?

Exercise- 44

Micro Inc. will pay dividend of $ 2.30 per share next year. If the company plans to increase its dividend by 9 percent per year indefinitely, and you require a 12 percent return on your investment, what should you pay for the company's stock?

Exercise- 45

Suppose you know that a company just paid an annual dividend of $ 1.75 per share on its stock and that the dividend will continue to grow at a rate of 8 percent per year. If the required return on this stock is 10 percent, what is the current share price?

Exercise- 46

The next expected annual dividend for Sun Inc. will be $ 1.20 per share and analysts expect the dividend to grow at an annual rate of 7 percent indefinitely. If the Sun stock currently sells for $ 22 per share, what is the required rate of return?

Exercise- 47

A share of common stock currently sells for $ 110. Current dividends are $ 8 per share annually and are expected to grow at 6 percent per year indefinitely. What is the rate of return required by investors in the stock?

Exercise- 48

The share of Simat Pharma Ltd. is currently selling for Tk. 320 a share and expected dividend is Tk. 12 per year. If you buy the stock now and sold it for Tk. 350 after receiving the dividend what rate of return have you earned?

Exercise- 49

The share of Seema Pharma Ltd. is currently selling for Tk. 350 a share and expected dividend is Tk. 15 per year. If you buy the stock now and sold it for Tk. 390 after receiving the dividend what rate of return have you earned?

Exercise- 50

Mr. Maruf has purchased a bond which face value of Tk. 100. The expected coupon rate from the bond is 16% each year in the next 8 years respectively. If the discount rate is 12%, what is the present value of the bond?

Exercise- 51

Mr. Mustak has purchased a bond which face value of Tk. 1,000. The expected coupon rate from the bond is 18% each year in the next 10 years respectively. If the discount rate is 14%, what is the present value of the bond?

Exercise- 52

Hobby Beverage Ltd. has issued a bond, face value of which is Tk. 200 at 15% coupon rate of interest for 12 years. If the discount rate is 12%, what is present value of the bond?

Exercise- 53

Boby Beverage Ltd. has issued a bond, face value of which is Tk. 500 at 16% coupon rate of interest for 15 years. If the discount rate is 13%, what is present value of the bond?

Exercise- 54

Sunmit Power Ltd. is thinking to issue a new bond at par value of Tk. 1000 for 10 years. The coupon rate of interest is 18% annually. What would be the price of the bond if required rate is 12%?

Exercise- 55

Summer Power Ltd. is thinking to issue a new bond at par value of Tk. 1000 for 10 years. The coupon rate of interest is 18% annually. What would be the price of the bond if required rate is 13%?

Exercise- 56

Pretam Bank Ltd. has issued a new bond at par value of Tk. 5000 at 12% coupon rate that pays halfyearly. If the required rate is 14%, calculate the value of bond at maturity period at 5 years.

Exercise- 57

Protan Bank Ltd. has issued a new bond at par value of Tk. 5000 at 12% coupon rate that pays halfyearly. If the required rate is 14%, calculate the value of bond at maturity period at 8 years.

Exercise- 58

Moham Paribahan Ltd. has outstanding bond issue that will mature to its Tk. 5000 par value in years. The coupon rate is 16% pays semiannually. Calculate the value of the bond if required rate is 15%.

Exercise- 59

Pohan Paribahan Ltd. has outstanding bond issue that will mature to its Tk. 1000 par value in 9 years. The coupon rate is 15% pays quarterly. Calculate the value of the bond if required rate is 9%.

Exercise- 60

Mr. Ruhul Amin is planning to invest in either of two bonds. Both have Tk. 1000 par value & 9% coupon rate of interest. Bond X is 10 years mature period & Bond Z is 12 years mature period.

(a) Calculate the value of Bond X if cost of capital is 12%
(b) Calculate the value of Bond Z if cost of capital is 12%
(c) Which bond should be bought?

Exercise- 61

Mr. Rutul Amin is planning to invest in either of two bonds. Both have Tk. 100 par value & 16% coupon rate of interest. Bond X is 12 years mature period & Bond Z is 14 years mature period.

(a) Calculate the value of Bond X if cost of capital is 10%
(b) Calculate the value of Bond Z if cost of capital is 11%
(c) Which bond should be bought?

Exercise- 62

Determine to value of the bond of ABC Company from the information given below:

Coupon rate = 15%; face value = Tk. 2,000
Discount rate = 12%; maturity period = 10 years.

Exercise- 63

Determine to value of the bond of PQ Company from the information given below:

Coupon rate = 16%; face value = Tk. 2,500
Discount rate = 13%; maturity period = 15 years.

Exercise- 64

Assume the following information for an existing bond that provides annual coupon payments:

Par value = Tk. 2,000; Coupon rate = 12%;
Maturity = 5 years; Required rate of return by investors = 11%.

(a) What is the present value of the bond?
(b) If the required rate of return by investors were 14 percent instead of 11 percent, what would be the present value of the bond?
(c) If the required rate of return by investors were 9 percent, what would be the present value of the bond?

Exercise- 65

Assume the following information for an existing bond that provides annual coupon payments:

Par value = Tk. 5,000; Coupon rate = 15%;
Maturity = 10 years; Required rate of return by investors = 12%.

(a) What is the present value of the bond?
(b) If the required rate of return by investors were 14 percent instead of 12 percent, what would be the present value of the bond?
(c) If the required rate of return by investors were 10.5 percent, what would be the present value of the bond?

Exercise- 66

A Tk. 2000 par value bond bearing 14% coupon rate having exactly 10 years remaining maturity, currently sells at Tk. 1,800. Interest is paid semiannually. If the nominal required return is 11.5%, find the intrinsic value of the bond?

Exercise- 67

A Tk. 1000 par value bond bearing 15% coupon rate having exactly 10 years remaining maturity, currently sells at Tk. 1,200. Interest is paid semiannually. If the nominal required return is 12.5%, find the intrinsic value of the bond?

Exercise- 68

Electra Company Ltd. issues a zero coupon bond having 10 years maturity with Tk. [illegible] value. If required rate of return is 13%, what is the present value of the bond?

Exercise- 69

Electronic Company Ltd. issues a zero coupon bond having 8 years maturity with Tk. [illegible] value. If required rate of return is 12%, what is the present value of the bond?

Exercise- 70

Assume the following information for an existing zero coupon bonds:
Par value = Tk. 1,000
Maturity = 5 years
Required rate of return by investors = 12%.
How much should investors be willing to pay for these bonds?

Exercise- 71

Assume the following information for an existing zero coupon bonds:
Par value = Tk. 2,000
Maturity = 10 years
Required rate of return by investors = 11%.
How much should investors be willing to pay for these bonds?

Exercise- 72

Mr. Shohel has purchased a perpetual bond from a pharmaceutical company. He will get 1,000 as an interest per year forever. If discount rate is 11.5%, what is the present value of bond?

Exercise- 73

Mr. Shahed has purchased a perpetual bond from a pharmaceutical company. He will get ,000 as an interest per year forever. If discount rate is 12.5%, what is the present value of ond?

xercise- 74

Tk. 1000 perpetual bond is currently trading in the market at Tk. 950. The coupon rate of interest 4% and discount rate is 16%, what is the value of the bond?

xercise- 75

Tk. 100 perpetual bond is currently trading in the market at Tk. 96. The coupon rate of interest % and discount rate is 15%, what is the value of the bond?

xercise- 76

ond will pay Tk. 120 annual interest into perpetuity, what is the value of the bond, if the cost capital rate 8%?

xercise- 77

ond will pay Tk. 115 annual interest into perpetuity, what is the value of the bond, if the cost capital rate 9%?

xercise- 78

hey Industries has outstanding a Tk. 1,000 par value bond with an 8% coupon interest rate. The nd has 12 years remaining to its maturity date.

) If interest is paid annually, find the value of the bond when the required return is (i) 7%, (ii) 8% and (iii) 10%?

) Indicate for each case in part a whether the bond is selling at a discount, at a premium, or at its par value.

) Using the 10% required return, find the bond's value when interest is paid semiannually.

xercise- 79

ucky Industries has outstanding a Tk. 2,000 par value bond with a 14% coupon interest rate. The ond has 10 years remaining to its maturity date.

a) If interest is paid annually, find the value of the bond when the required return is (i) 10%, (ii) 12% and (iii) 15%?

b) Indicate for each case in part a whether the bond is selling at a discount, at a premium, or a its par value.

c) Using the 10% required return, find the bond's value when interest is paid semiannually.

xample- 80

bond face value is Tk. 2000 at the 14% coupon rate for 12 years. If the market price is T 920, what is the yield to maturity of the bond?

xample- 81

bond face value is Tk. 1000 at the 12% coupon rate for 10 years. If the market price is Tk. 9 hat is the yield to maturity of the bond?

xercise- 82

he sales price of Soton Pharma Ltd.'s bond is Tk. 950 with coupon rate of interest is ayable yearly. Where as face value of bond is Tk. 1000 with 10 years to maturity.

A) Calculate YTM on the bond using approximation method.

B) Calculate YTM on the bond using trail & error method.

C) Compare the yields of A & B. Discuss the utility of approximation method. Which method should you prefer & why?

Exercise- 83

The sales price of Sotom Pharma Ltd.'s bond is Tk. 980 with coupon rate of interest is 14% payable half yearly. Whereas face value of bond is Tk. 1000 with 8 years to maturity.

(A) Calculate YTM on the bond using approximation method.

(B) Calculate YTM on the bond using trail & error method.

(C) Compare the yields of A & B. Discuss the utility of approximation method. Which method should you prefer & why?

Exercise- 84

A 12%, 10 years bond of Tk. 2,000 has been issued @ 5% discount and redeemed @ 4% premium. If flotation cost is 2% of face value, then calculate its approximate YTM.

Exercise- 85

A 14%, 12 years bond of Tk. 5,000 has been issued @ 4% discount and redeemed @ 5% premium. If flotation cost is 2.5% of face value, then calculate its approximate YTM.

== The Chapter End ==

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