PRINCIPLES OF INVESTMENTS SUGGESTED ANSWERS NOV 2016

QUESTION 1

a) An investment portfolio is a collection of asset classes that an investor may decide to keep his money in. 2 marks

Because different classes are exposed to different risks, a diversified investment will ensure that funds are spread over a number of assets so as to reduce the risk. 2 marks

The above fact is based on the premise that not all asset classes are affected in the same way by macroeconomic factors. 2 marks

What this means therefore is that a well balanced and diversified portfolio will give a higher return than a less diversified one .This is because different asset classes will respond differently to economic factors.

2 marks

To achieve the above result, assets in the portfolio should be less correlated or even not correlerated at all. 1 mark

b) Any three for 2 marks each

* Preference shares carry priority over ordinary shares in dividend payout and upon liquidation.
* These shares are callable at the option of either party hence relieving an investor of future possible risks.
* Dividend payout for preference shares are fixed and may be cummulative
* They carry an option where they can be converted into ordinary shares as and when it becomes beneficial to the investor to hold ordinary shares.

QUESTION 2

1. Net Capital Employed = Fixed Assets + Investments + Working capital 1 mark

= (10,000 +35,000) + 12,000 + (25,000+9,000-14,000-5,000-7,000) 2 mark

=45,000+12,000 + (34,000-26,000) 1 mark

= 47,000 +8,000

=55,000 1 mark

b) The following adjustments need to be taken into account any five for 2 marks each

* Net profit should be taken before payment of tax or provision for tax because tax is paid after profits have been earned and it has no relation to earning capacity of the business
* If capital employed is gross, then net profit should be considered before interest on long term borrowing as well as shortterm borrowing.
* If capital employed is used in the sense of net capital employed then only interest on long term borrowing should be added back as short term borrowing and current liabilities are deducted in calculating net capital employed.
* If any asset has been excluded from computing capital employed then any income arising from such an asset should as well be excluded from net profit computation
* Net profit should be adjusted for any abnormal, non recurring and non operating gains or losses as well as sale of fixed assets.
* Net profit should be adjusted for depreciation based on replacement cost , if assets have been added at replacement cost.

QUESTION 3

1. When share holders of issued securities through IPO want to sell their securuites, they do so in the secondary market .In this market the seller surrenders his shares to the buyer in exchange for cash and those shares are cancelled in his name and get registered in the name of the buyer. The exchange process will pass through brokers and the stock exchange. 2 marks

Shares in secondary market trade in two system namely order-driven or auction market and quote –driven or dealer markets 1 mark

In oder-driven, buyers and sellers submit bids and ask prices to a central location where orders are matched by brokers. On the other hand, quote –driven are markets where individual dealers act as market makers by buying and selling for themselves.In this market, investors must go to a dealer and prices are determined principally by dealers bid / offer quotations 4 marks

b) The following are attributes for an attractive market;

* Timely and accurate information on prices ,and volume on past transactions and prevailing supply and demand of the securities 2 marks
* Liquidity – The securities should be able to quickly and cheaply turn into cash at prices which are not substantially different from previous trade given same information.

2 marks

* Internal efficiency meaning that transaction costs as a percentage of the trade value should be low or minimal. 2 marks
* External or information efficiency - This refers to market prices to quickly adapt to new information so that current prices are fair in that they reflect all available information on the security. 2 marks

QUESTION 4

1. Risk of an investment is the degree of uncertainity about whether the required rate of return will be achieved or not while expected rate of return is the averages of all possible future returns on an investment. 2 marks

b)

i) Security Proportion Return (%) Weighted Value (%)

10 year Government bond 0.15 14 2.10 1 mark

Bank`s listed shares 0.40 15 6.00 1 mark

Agri – business shares 0.25 15.5 3.88 1 mark

Real estate 0.20 18 3.60 1 mark

**Expected return 15.58 1 mark**

ii)

**Govt security offers risk free rate**  1 mark

Required Return for banking shares = Rf + b (km – Rf) 1 mark

= 0.14 + 1.8 (0.18 – 0.14) 1 mark

= 0.14 +0.072 1 mark

= 0.212

=21.20 % 1 mark

Required Return for Agri –business = 0.14 + 0.9 (0.16 – 0.14) 1 mark

= 0.14 +0.018 1 mark

= 0.158

=15.80 % 1 mark

**SECTION B**

**QUESTION 5**

a) Financial statement analysis is a process of identifying financial strength and weakness of a firm by properly establishing the relationship between the items in the balance sheet and Profit & loss account. 2 marks

The following are the methods used; any three for 3 marks

* Comparative statements
* Schedule of changes in working capital
* Common size percentage
* Funds analysis / Trend analysis

b)

i) Current ratio = 19,000 + 3,500+8,000+4,000 / 2,500 + 3,000 + 6,000 1 mark

= 34,500 / 11,500 1 mark

= 3 : 1 1 mark

ii) Acid test ratio = 3,500+8,000+4,000 / 2,500 + 3,000 + 6,000

= 15,500 / 11,500 1 mark

= 1.3 : 1 1 mark

c) Dividend payout ratio is meant to calculate the extent to which earnings per share has been paid out to investors while retained earning ratio is a measure of the extent of earnings which has been ploughed back in the business .The higher the retained ratio or the lower the dividend payout ratio means that the business will have a stronger financial position. 4 marks

d) The following are reasons which render current ratio unpopular; 2 marks for each

* It is crude because it measures only quantity and not quality of current asset.
* Even if the ratio is favourable, the firm may be in trouble because more stock or work in process may not be easily conventible into cash and hence the firm may have less cash.
* Valuation of current assets and window dressing is another problem which may lead to value manipulation

**QUESTION 6**

a) The following are the conditions 1 mark for each

* Buy the bond at market value
* Hold the bond until maturity
* Reedem the bond at par

b)

Coupon amount = 12,000,000 x 8 %

= 960,000 1 mark

Current yield = C / Po 1 mark

=960,000 / 11,650,000 1 mark

= 8.24% 1 mark

c) Two distinct characteristics of municipal bonds are taxability and risk.

The main reason why municipal bonds are considered seperately from other types of bonds is their special ability to provide tax exempt income on interest paid to investors. 1 mark

In most cases if the funds raised through bond issuance are to be used on a public interest project such as school or transport system, then interest earned by the investors will be tax exempted. 2 marks

Of course not all municipal bonds are tax exempt, it has to be certified and made it know to the public before it is offered to the market. 2 marks

Basically risk of the bond is a measure of how likely the issuer is to make all payments on time and in full as promised in the agreement between the issuer and the bond holders. As such, the bond can be secured by various repayment sources hence the following types of municipal bonds; 2 marks

* General obligated bond which promised to repay based on full faith credit of the issuer. 2 marks
* Revenue bond which promises to pay from a specified stream of future income 2 marks
* Assessment bonds which promises to pay based on property tax assessments of property located within the issuer boundaries 2 marks

**SECTION 7**

a) Efficient Market hypothesis model assumes that because of financial risk, investors will require atleast a small premium on the expected value as return on equity investment are higher than return on non –equity investment.Otherwise rational investors would shift their investment to safer non – equity investment. 2 marks

The second belief of EMH is that share prices at every moment are a reflection of expected future value as determined by the emergence of information. As a result of this, proffessional investors immerse themselves in the flow of information to gain advantage over competitors 2 marks

Behaviour Finance Model on the other hand believe that human often make irrational decisions relating to buying and selling of securities based on fears and perception of the outcomes.Irrational security trading hence results into prices to vary from rational and fundamental price valuations. 2 marks

Under this theory, investors buy securities that they think another investor will irrationally buy it at a higher price in future.All in all investors bank their return not on fundamentals but on other`s irrationality 2 marks

b)

Top down, three steps valuation holds that regardless of qualities or capabilities of a firm and management, the economic and industry environment has a major impact on the success of a firm and the rate of return on its stock. 2 marks

For example if an investor owns shares on a viable and successful firm during expansional economic phase, the share is likely to give higher returns on the back of increased sales and earnings of a firm. The opposite is true during recession phase. 2 marks

This therefore summarise that when estimating future value of a security and its rate of return, it is absolutely essential to analysise the aggregate economy and the industry the firm operates in. 2 marks

Bottom up aproach of valuation on the other hand disregard economic conditions and industry potential but only focusses on the individual firm`s attributes such as sales and earnings figures, balance sheet and cashflow statement. 2 marks

To the investor, balance sheet reflects management effectiveness and wise allocation of capital while strong cashflows depicts the firm`s capability to finance its operations without need to raise additional debt. 2 marks

The approach also emphasises that the sucessful firm is that one which increase its market share and expand into new markets with solid prospects. 2 marks 2 marks

**QUESTION 8**

Beta for P = (0.14X1.55)+(0.26 X 0.95)+(0.40X1.30)+(0.20 X0.85) 2 marks

=0.217 + 0.247 + 0.52 +0.17 1 mark

=1.154 1 mark

Beta for Q = (0.15X1.85) + (0.45 X 1.35) + (0.15X1.15) + (0.25 X0.75) 2 marks

=0.278 + 0.608 + 0.173 +0.188 1 mark

=1.247 1 mark

Portfolio P has lower risk .This is because the other portfolio has a higher beta –The higher the beta the riskier the security. 2 marks

b)

Abritrage Pricing Model is an asset pricing modeal based on the idea that an asset `s return can be predicted using the relationship between that same assets and many common risk factors. 2 marks

It is predicts a relationship between returns on a portfolio and return of a single asset through a linear combination of many independent macro economic variables. 2 marks

The model describes the price where a misplaced asset is expected to be. It is thus viewed as an alternative to the capital asset model since it has more flexible assumption requirement. 2 marks

Whereas CAPM theory requires the market expected return, the Arbitrage Pricing theory uses risky asset`s expected return and risk premium of a number of macro economic factors. 2 marks

Using this model, the arbitrageurs profit by taking advantages of mispriced security , ie the security`s price that diffres from its theoretical predicted price by going short on the overpriced assets while concurently going long on the portfolio. 2 marks

In this way risk-free profits are made.