

**KC 2 – Corporate Finance & Risk Management**

**Suggested Answers and Marking Grid**

## Section 1

### Question No - 01

A.

| Learning Outcomes  |
|--|
| 5.2.6 Advise on regulatory implications and procedures on mergers and acquisitions (Companies Act, Securities Exchange Control regulations and other regulatory bodies). |

1 . As per the Takeovers and Mergers Code, since ABC has acquired 10% of PQR, ABC has to follow the 10% disclosure requirement; i.e. within two market days after acquisition ABC has to inform the management of the target company, the Colombo Stock Exchange (CSE) and the Securities and Exchange Commission (SEC) about the 10% share ownership of PQR.

When ABC has acquired ownership of 30% of the voting rights of PQR, it is required to comply with rule 31 of the Takeovers and Mergers Code. A cash offer has to made for the shares held by all remaining shareholders of PQR at the highest market price prevailing during the last 12 months.

Any further acquisition equal to or exceeding 2% of the voting rights has to be communicated to the CSE and SEC.

The objective of ABC is to acquire controlling interest in PQR with no intention of acquiring 100% of PQR. However, because of the mandatory offer rule, the acquisition looks expensive due to the following reasons:

- With the announcement of the 10% acquisition, the management of PQR becomes aware of the hostile takeover. Accordingly, PQR may take protective actions which result in the share price of PQR going up and as a result ABC would be compelled to purchase the shares possibly at a higher price than they are worth.
- In case all or a substantial number of shareholders of PQR accept the offer, ABC has no option than to buy the shares at a higher price.
- On the other hand, if PQR's shareholders via management collectively decide not to sell further shares, ABC's strategy would become null halfway through the process. If so, an investment has already been made in an asset without generating the expected result.

Due to these reasons, before taking further actions ABC should carry out a cause and effect analysis under each scenario.

ABC has to consider alternative strategies instead of a hostile takeover to acquire PQR's controlling interest and thereby eliminate the possibility of buying PQR at a higher price than it is worth.

**(10 marks)**

2 .

| Learning Outcomes   |
|---|
| 5.2.1 Evaluate business valuation techniques (asset based, earnings based, proxy PE based, cash flow based) for a specific merger or acquisition or divestment. |

### **Reasons for undervalues shares**

- **The share is unnoticed**

Companies might sell for less than they're worth because they're under the radar. Small cap shares, foreign shares, and any other shares that aren't in the headlines or aren't household names sometimes offer great potential but don't get the attention they deserve.

- **The stock isn't glamorous**

Everyone wants to invest in the next big thing or even the current big thing. Not only do investors think they can make a fortune this way, but it's a lot more exciting to say you became a millionaire by purchasing shares of a technology start-up than by purchasing shares of an established consumer durables manufacturer. Media darlings like Microsoft, Apple and Google are more likely to be affected by herd mentality investing than conglomerates like Proctor and Gamble or Johnson and Johnson.

- **A company announces bad news**

Even good companies face setbacks like litigation and recalls. However, just because a company experiences one negative event doesn't mean that the company isn't still fundamentally valuable or that its shares won't bounce back. Companies with real value can experience a significant drop in share price when something bad happens. However, investors often overreact to the magnitude of the information, opening up buying opportunities for value investors who strictly follow fundamental principles.

Those who are willing to consider the company's long-term value and ability to recover can turn these setbacks into profit opportunities.

- **One part of the company is underperforming, but other parts are still strong**

Sometimes a company has an unprofitable division that drags down its performance. If the company sells or closes that division, its financials can improve dramatically. Value investors who see this potential can buy the share while its price is depressed and see gains later.

- **The share doesn't meet analysts' expectations**

Analysts do not have a great track record for predicting the future, and yet investors often panic and sell when a company announces earnings that are lower than analysts' expectations. This irrational behavior can temporarily depress the share price.

- **The share is cyclical**

It is common for companies to go through periods of higher and lower profits. The time of year and the overall economy affect consumers' moods and cause them to buy more or less. Their behavior might affect the share price, but it has nothing to do with the company's long term underlying value.

**(5 marks)**

B.

| Learning Outcomes  |
|--|
| 6.2.2 Assess various types of financial derivatives (including forward contracts, futures, swaps and options). |

**Alternative 1 - Currency SWAPC is used**

W1. Total investment cost in LKR

$$\frac{1500}{20} = 75 \text{ mn LKR}$$

This will be the initial amount being transferred under SWAP agreement

W2. The opportunity cost

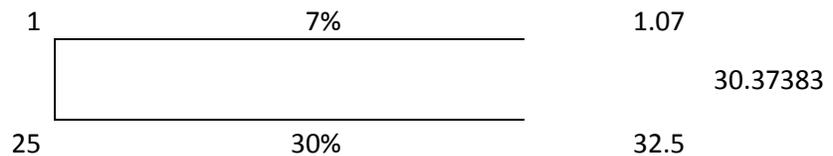
$$\frac{1000}{20} = 50 \times 12\% = 6 \text{ mn LKR}$$

$$\frac{500}{20} = 25 \times 6\% = \frac{1.5}{7.5} \text{ mn LKR}$$

W3. Expected Exchange rates - One year

LKR 7% , APC 30%

One year forward rate has been calculated based on inflation rates



LKR 5% , APC 20%

|       |     |      |          |
|-------|-----|------|----------|
| 1     | 5%  | 1.05 |          |
| <hr/> |     |      |          |
| 25    | 20% | 30   | 28.57143 |

LKR 4% , APC 10%

|       |     |      |          |
|-------|-----|------|----------|
| 1     | 4%  | 1.04 |          |
| <hr/> |     |      |          |
| 25    | 10% | 27.5 | 26.44231 |

W4. Money to be returned to Company back

|                      |          |   |       |                |        |
|----------------------|----------|---|-------|----------------|--------|
| Total contract price |          |   | 2,000 |                | mn APC |
| Deduct               | Interest |   |       |                |        |
|                      | 1000     | x | 10%   | (100)          | mn APC |
|                      | 500      | x | 5%    | (25)           |        |
| Less / Principle     |          |   |       | <u>(1,500)</u> | mn APC |
|                      |          |   |       | <u>375</u>     | mn APC |

| Rate        | APC Mn | LKR Mn | Less/<br>Opportunity<br>Cost | Net<br>Benefit |
|-------------|--------|--------|------------------------------|----------------|
| 30.37383178 | 375    | 12.35  | 7.5                          | 4.85           |
| 28.57142857 | 375    | 13.13  | 7.5                          | 5.63           |
| 26.44230769 | 375    | 14.18  | 7.5                          | 6.68           |

| Expected Value   |             |             |                    |
|------------------|-------------|-------------|--------------------|
|                  | Net Benefit | Probability | Expected value     |
| LKR 7% , APC 30% | 4.85        | 0.3         | 1.45               |
| LKR 5% , APC 20% | 5.63        | 0.6         | 3.38               |
| LKR 4% , APC 10% | 6.68        | 0.1         | <u>0.67</u>        |
|                  |             |             | <u><b>5.50</b></u> |

The expected value under above scenario is 5.50 mn LKR

#### Alternative 2 - Currency SWAPC is not used

##### LKR 7% , APC 30%

Mn

|                  |                    |   |            |                    |
|------------------|--------------------|---|------------|--------------------|
| Initial cost     | 1000 mn            | @ | 25         | (40.00)            |
| In six month     | 500 mn             | @ | 27.7777778 | (18.00)            |
| In one year      | 2000 mn            | @ | 30.3738318 | 65.85              |
| Opportunity cost | (40*12%) + (18*6%) |   |            | <u>(5.88)</u>      |
| net              |                    |   |            | <u><u>1.97</u></u> |

##### LKR 5% , APC 20%

Mn

|                  |                      |   |            |                    |
|------------------|----------------------|---|------------|--------------------|
| Initial cost     | 1000 mn              | @ | 25         | (40.00)            |
| In six month     | 500 mn               | @ | 26.8292683 | (18.64)            |
| In one year      | 2000 mn              | @ | 28.5714286 | 70.00              |
| Opportunity cost | (40*12%)+( 18.64*6%) |   |            | <u>(5.92)</u>      |
| net              |                      |   |            | <u><u>5.44</u></u> |

LKR 4% , APC 10%

|                  |                      |   |            | Mn      |
|------------------|----------------------|---|------------|---------|
| Initial cost     | 1000 mn              | @ | 25         | (40.00) |
| In six month     | 500 mn               | @ | 25.7352941 | (19.43) |
| In one year      | 2000 mn              | @ | 26.4423077 | 75.64   |
| Opportunity cost | (40*12%)+( 19.43*6%) |   |            | (5.97)  |
| net              |                      |   |            | 10.24   |

**Expected Exchange rates - Six months**

LKR 7% , APC 30%

|   |      | Annual |          |
|---|------|--------|----------|
| 1 | 3.5% |        | 1.035    |
|   |      |        | 27.77778 |
|   |      | 25     | 15%      |

LKR 5% , APC 20%

|   |      | Annual |          |
|---|------|--------|----------|
| 1 | 2.5% |        | 1.025    |
|   |      |        | 26.82927 |
|   |      | 25     | 10%      |

LKR 4% , APC 10%

|   |    | Annual |          |
|---|----|--------|----------|
| 1 | 2% |        | 1.02     |
|   |    |        | 25.73529 |
|   |    | 25     | 5%       |

| Expected Value   |             |             |                |
|------------------|-------------|-------------|----------------|
|                  | Net Benefit | Probability | Expected value |
| LKR 7% , APC 30% | 1.97        | 0.3         | 0.59           |
| LKR 5% , APC 20% | 5.44        | 0.6         | 3.27           |
| LKR 4% , APC 10% | 10.24       | 0.1         | 1.02           |
|                  |             |             | <u>4.88</u>    |

The expected value under above scenario is 4.88 mn LKR

### Conclusion

The following results can be observed from the analysis.

|   |                               |
|---|-------------------------------|
| ABC enters into a currency SWAP         | Expected value of 5.50 Mn LKR |
| ABC does not enter into a currency SWAP | Expected value of 4.88 Mn LKR |

**The calculations above clearly indicate that ABC will benefit by entering into a currency SWAP.**

**(10 marks)**

**Total 25 marks**

## Question No - 02

### Learning Outcomes ( Part 1,2,3 & 4)

4.1.2 Evaluate investment projects using discounting factor/non-discounting factor techniques with:

- Tax
- Inflation (monetary and real method)
- Unequal life projects (annual equivalent method only)
- Asset replacement
- Capital rationing (including multi period capital rationing)
- Under uncertainty (certainty equivalent, adjusting discounting factors/payback, using probability and sensitivity analysis)
- Foreign investments (using forward exchange rates or country-specific Discounting factors).

1.

**Three Directors are commenting on three different methods which can be used effectively in appraising projects.**

**Note – The question does not indicate for any need to show calculations to support the answer but critically evaluate various options suggested by directors in principal. It is very important for students to read and understand the questions property to avoid time being spent in answering areas which have not been requested to answer.**

### **Director A**

Director A prefers average profits in evaluation of projects. Average profit is a poor criterion to use in investment appraisal. Although readily understood by managers, it fails to take into account the time value of money or the incremental cash flows from the investments. Also the accounting profit would be subject many assumptions and various accounting standards used in financial accounting. There is greater possibility for accountants to go for a window dressing situation in order to show better results or later the results the way they would prefer to see. . The size of the initial outlay of the project is also ignored by this measure.

Therefore a resource allocation decision should be based upon cash flows not profit, which is a reporting measure.

### **Director B**

Director B prefers discounted payback in evaluation of projects.

Payback is frequently used as part of investment appraisal, often being argued by management to select less risky investments from among several alternatives.

Its major weakness is that it ignores cash flows after the payback period is complete. Such cash flows might be substantial and influence the investment decision where mutually exclusive investments are concerned. Discounted payback has the advantage of taking account of the time value of money, but still ignores cash flows after the discounted payback period. However, if the investment has a discounted payback period within its expected lifespan, it must have a zero or positive net present value, and be considered to be financially viable. If investments are not mutually exclusive, discounted payback will lead to the same decisions as NPV. If, as in this case, investments are mutually exclusive, an investment that does not maximise net present value could result from using discounted payback. A further

problem is that working capital cash flows are difficult to incorporate within this technique. Therefore one may argue that discounted payback method is comparatively better than the average profit from many aspects. However the discounted payback has its own disadvantages as explained before.

**Director C**

Director C has considered only guaranteed income. It indicated that Director C is a risk adverse investor. We cannot simply say that his view point is correct as the risk preference of various people is different. The relationship can be presented below.

|                        |  |
|------------------------|--|
| Low risk preference    | Lower returns ( example – Treasury bills)                                  |
| Medium risk preference | Medium returns ( average risk investments)                                 |
| High risk preference   | Higher Returns ( Ex- Invest to launch a totally new product to the market) |

The above table indicates a relationship between risk and return.

Low risk - Lower returns

High risk – Higher returns

Therefore if the company PQR wisher to be exposed to a greater risk or has the ability to undertake greater risk just investing in risk free investments will not give them maximum return. Therefore they should first decide on their risk preference and invest in such investment to maximize the wealth.

In order to incorporate the risk element, they will have to discount each projects by an appropriate discount factor that has considered the risk element of such project and see if there is positive NPV and compare all the options before making a decision.

Relationship of discounting rates

Lower risk projects – lower discount rate

High risk projects - Higher discount rates

**(6 marks)**

2. Payback is normally calculated using after-tax cash flows.

| <b>Investment 1</b>            |         |       |       |       |       |       |      |
|--------------------------------|---------|-------|-------|-------|-------|-------|------|
| Year / Rs. Mn                  | 0       | 1     | 2     | 3     | 4     | 5     | 6    |
| Initial cost                   | -1000   |       |       |       |       |       |      |
| Sales (9% Increase)            |         | 786   | 860   | 939   | 1,290 | 1,461 |      |
| Production costs (9% Increase) |         | 520   | 654   | 832   | 1,166 | 1,412 |      |
| Taxable                        |         | 266   | 206   | 107   | 125   | 49    |      |
| Tax                            |         |       | (66)  | (52)  | (27)  | (31)  | (12) |
| CA                             |         |       | 63    | 47    | 35    | 26    | 20   |
| Balance CA                     |         |       |       |       |       |       | 59   |
| Net Cash Flow                  | (1,000) | 266   | 202   | 102   | 133   | 45    | 67   |
| DF                             | 1       | 0.865 | 0.749 | 0.648 | 0.561 | 0.485 | 0.42 |
| PV                             | (1,000) | 230   | 152   | 66    | 75    | 22    | 28   |
|                                | (428)   |       |       |       |       |       |      |
| Payback - None                 |         |       |       |       |       |       |      |
| NPV - (428)mn                  |         |       |       |       |       |       |      |

| <b>Investment 2</b>            |       |       |       |       |       |       |      |
|--------------------------------|-------|-------|-------|-------|-------|-------|------|
| Year /Rs . Mn                  | 0     | 1     | 2     | 3     | 4     | 5     | 6    |
| Initial cost                   | -350  |       |       |       |       |       |      |
| Sales (9% Increase)            |       | 1,031 | 1,338 | 1,502 | 1,528 | 1,804 |      |
| Production costs (9% Increase) |       | 920   | 1,134 | 1,307 | 1,528 | 1,779 |      |
| Taxable                        |       | 111   | 205   | 195   | (1)   | 26    |      |
| Tax                            |       |       | (28)  | (51)  | (49)  | 0     | (6)  |
| CA                             |       |       | 22    | 16    | 12    | 9     | 7    |
| Balance CA                     |       |       |       |       |       |       | 21   |
| Net Cash Flow                  | (350) | 111   | 199   | 160   | (37)  | 35    | 21   |
| DF                             | 1     | 0.865 | 0.749 | 0.648 | 0.561 | 0.485 | 0.42 |
| PV                             | (350) | 96    | 149   | 104   | (21)  | 17    | 9    |
|                                | 4     |       |       |       |       |       |      |
| Payback - 3 yrs                |       |       |       |       |       |       |      |
| NPV - 4 mn                     |       |       |       |       |       |       |      |

| CAPITAL ALLOWANCES CALCULATION |      |     |     |       |
|--------------------------------|------|-----|-----|-------|
| <b>INVESTMENT 1</b>            |      |     |     |       |
|                                | 1000 | 250 | 750 | 63    |
|                                | 750  | 188 | 563 | 47    |
|                                | 563  | 141 | 422 | 35    |
|                                | 422  | 105 | 316 | 26    |
|                                | 316  | 79  | 237 | 20    |
|                                |      |     |     | 59.33 |
| <b>INVESTMENT 2</b>            |      |     |     |       |
|                                | 350  | 88  | 263 | 22    |
|                                | 263  | 66  | 197 | 16    |
|                                | 197  | 49  | 148 | 12    |
|                                | 148  | 37  | 111 | 9     |
|                                | 111  | 28  | 83  | 7     |
|                                |      |     |     | 20.76 |

| SALES REVENUE CALCULATION |                  |                    |             |                       |                 |  |                  |                    |             |                       |                 |  |
|---------------------------|------------------|--------------------|-------------|-----------------------|-----------------|--|------------------|--------------------|-------------|-----------------------|-----------------|--|
| INVESTMENT 1              |                  |                    |             |                       |                 |  | INVESTMENT 2     |                    |             |                       |                 |  |
| year                      | Existing Revenue | Exchange rate used | INR Revenue | Correct Exchange Rate | Correct Revenue |  | Existing Revenue | Exchange rate used | INR Revenue | Correct Exchange Rate | Correct Revenue |  |
| 1                         | 800              | 2.11               | 379         | 2.07                  | 786             |  | 1,050            | 2.11               | 498         | 2.07                  | 1031            |  |
| 2                         | 900              | 2.11               | 427         | 2.02                  | 860             |  | 1,400            | 2.11               | 664         | 2.02                  | 1338            |  |
| 3                         | 1000             | 2.11               | 474         | 1.98                  | 939             |  | 1,600            | 2.11               | 758         | 1.98                  | 1502            |  |
| 4                         | 1400             | 2.11               | 664         | 1.94                  | 1,290           |  | 1,658            | 2.11               | 786         | 1.94                  | 1528            |  |
| 5                         | 1600             | 2.11               | 758         | 1.93                  | 1,461           |  | 1,976            | 2.11               | 937         | 1.93                  | 1804            |  |

|                                     |     | Year 1 | Year 2  | Year 3    | Year 4    | Year 5    |
|-------------------------------------|-----|--------|---------|-----------|-----------|-----------|
| <b>Calculation of Exchange Rate</b> |     |        |         |           |           |           |
| <b>1</b>                            | IND | 1.12   | 1.2544  | 1.392384  | 1.5316224 | 1.6694684 |
| <b>Exchange Rate</b>                |     |        |         |           |           |           |
|                                     |     | 2.07   | 2.02    | 1.98      | 1.94      | 1.93      |
| <b>2.11</b>                         | SL  | 2.321  | 2.52989 | 2.7575801 | 2.9781865 | 3.2164414 |
| <b>INFLATION RATE</b>               |     |        |         |           |           |           |
|                                     | IND | 112%   | 112%    | 111%      | 110%      | 109%      |
| <b>INFLATION RATE</b>               |     |        |         |           |           |           |
|                                     | SL  | 110%   | 109%    | 109%      | 108%      | 108%      |

The discount rate should be calculated by considering inflation adjustment (  $1+8\%$ ) (  $1+7\%$ )  
= 15.56%

Investment 1 does not have the quicker discounted payback period, as it fails to pay back within its expected life.

**(4 marks)**

**3.**

- ✓ The project 01 ends up with a negative NPV of 428mn hence should be rejected
- ✓ The project 2 ends up with a positive NPV of 4 mn LKR.

As a rule of thumb the project 2 can be accepted due to positive NPV. However the final result depends on the accuracy of estimates made and any slightest error would lead the project to end up with a negative NPV. Therefore the margin for error for project two even is minimal and the management should assess the acceptability of estimates and make a conscious decision to choose the second project, if there is no any other viable project to undertake.

**(10 marks)**

#### 4. Relevant non-financial factors might include:

Although the financial appraisal for making an investment is a vital part of the decision-making process, non-financial factors can also be very important.

Key non-financial factors may include:

- Meeting the requirements of current and future legislation
- Environmental factors
- Speed of delivery and installation of capital equipment
- Availability of spare parts and servicing (if required).
- Reliability of capital equipment. which the depreciation allowance can be set.
- Matching industry standards and good practice
- Developing the capabilities of business, such as building skills and experience in new areas or strengthening management systems
- The availability of suitably skilled labour
- Anticipating and dealing with future threats, such as protecting intellectual property against potential competition

For example, a company might need to take into account the environmental impact of a potential investment. To some extent, this may be reflected in financial factors, eg the energy savings offered by new machinery. But other effects - such as the effect on company's reputation will not be considered in financial evaluations.

In some cases, non-financial criteria may be essential requirements. For example, a company would not invest in new machinery that breaks health and safety regulations.

**(5 marks)**

**Total 25 marks**

## Section 2

### Question 03

#### 1. (a)

| Learning Outcomes  |
|--|
| 1.2.2 Analyzed financial results by using trends and ratios [including the DuPont analysis in financial statements across time/different companies/different accounting policies in appraising the short and long-term viability of the organization(working capital issues such as overtrading and solutions to overtrading is expected to be discussed here)]. |

#### Financial statement analysis- Du Pont Formulae

| PROFIT AND LOSS ACCOUNTS<br><br>FOR THE YEAR ENDED 31 MARCH | Clayhaus Tiles  |                 | MIGAYA TILES    |                 |
|---|-----------------|-----------------|-----------------|-----------------|
|   | 2015<br>Rs.'000 | 2014<br>Rs.'000 | 2015<br>Rs.'000 | 2014<br>Rs.'000 |
| Revenue   | 1,447,812       | 1,423,705       | 4,106,015       | 3,641,563       |
| Cost of Sales   | -1,111,299      | -1,052,600      | -3,026,511      | -2,512,679      |
| Gross Profit  | 336,513         | 371,105         | 1,079,504       | 1,128,884       |
| Other Income  | 30,775          | 9,404           | 18,204          | 116,081         |
| Administrative Expenses                                     | -83,624         | -82,913         | -252,207        | -158,757        |
| Distribution Expenses                                       | -88,212         | -70,248         | -462,450        | -297,914        |
| Other Expenses  | -346            | -5,722          |                 |                 |
| Net Finance Costs   | -68,387         | -43,054         | -252,894        | -165,562        |
| Profit Before Taxation                                      | 126,718         | 178,573         | 130,157         | 622,732         |
| Income Tax Expenses   | -26,907         | -54,999         | -39,047         | -186,820        |
| Profit After Tax  | 99,811          | 123,574         | 91,110          | 435,912         |
| Earnings per share  | 5.55            | 6.34            | 0.43            | 2.25            |
| Dividend Per Share (Rs.)                                    | 0.55            | 0.75            | 0               | 2               |
| Market Value of Shares as at the year end                   | 13.59           | 14.88           | 14.6            | 18.4            |

| AS AT 31 MARCH                      | Clayhaus Tiles   |                  | Migaya Tiles     |                  |
|-------------------------------------|------------------|------------------|------------------|------------------|
|                                     | 2015<br>Rs '000  | 2014<br>Rs '000  | 2015<br>Rs '000  | 2014<br>Rs '000  |
| ASSETS                              |                  |                  |                  |                  |
| <u>NON CURRENT ASSETS</u>           |                  |                  |                  |                  |
| Property, Plant & Equipment         | 3,272,943        | 3,111,383        | 2,971,624        | 2,654,682        |
| Long term Investment                |                  |                  | 142,995          | 194,742          |
| <u>CURRENT ASSETS</u>               |                  |                  |                  |                  |
| Inventories                         | 1,350,855        | 717,358          | 1,919,980        | 1,565,072        |
| Trade and Other Receivables         | 787,092          | 721,874          | 978,845          | 591,773          |
| Other Investments                   | -                | -                | 318,859          | 450,027          |
| Cash and Cash Equivalents           | 127,546          | 50,919           | 35,272           | 47,462           |
|                                     | <u>2,265,493</u> | <u>1,490,151</u> | <u>3,252,956</u> | <u>2,654,334</u> |
| <b>TOTAL ASSETS</b>                 | <u>5,538,436</u> | <u>4,601,535</u> | <u>6,367,575</u> | <u>5,503,758</u> |
| EQUITY AND LIABILITIES              |                  |                  |                  |                  |
| Stated Capital                      | 156,000          | 156,000          | 2,289,750        | 2,096,250        |
| Reserves                            | 525,301          | 428,943          | 77,850           | 77,850           |
| Retained Earnings                   | 696,645          | 668,738          | 588,469          | 690,859          |
|                                     | <u>1,377,946</u> | <u>1,253,681</u> | <u>2,956,069</u> | <u>2,864,959</u> |
|                                     |                  |                  | -                | -                |
| <u>NON CURRENT LIABILITIES</u>      |                  |                  |                  |                  |
| Loans and Borrowings                | 1,257,526        | 964,357          | 806,388          | 684,499          |
| Employee Benefits                   | 530,645          | 464,696          | 144,299          | 199,653          |
|                                     | <u>1,788,171</u> | <u>1,429,053</u> | <u>950,687</u>   | <u>884,152</u>   |
| <u>CURRENT LIABILITIES</u>          |                  |                  |                  |                  |
| Trade and Other Payables            | 972,588          | 1,206,349        | 1,180,676        | 770,513          |
| Loans and Borrowings                | 930,647          | 449,392          | 790,057          | 644,895          |
| Bank Overdraft (Secured)            | 469,083          | 263,059          | 490,086          | 339,239          |
|                                     | <u>2,372,319</u> | <u>1,918,800</u> | <u>2,460,819</u> | <u>1,754,647</u> |
| <b>TOTAL EQUITY AND LIABILITIES</b> | <u>5,538,436</u> | <u>4,601,535</u> | <u>6,367,575</u> | <u>5,503,758</u> |

|                        | Clayhaus Tiles  |                 | MIGAYA TILES    |                 |
|------------------------|-----------------|-----------------|-----------------|-----------------|
|                        | 2015<br>Rs.'000 | 2014<br>Rs.'000 | 2015<br>Rs.'000 | 2014<br>Rs.'000 |
| Return in Equity (ROE) |                 |                 |                 |                 |
| Profit After Tax       | 99,811          | 123,574         | 91,110          | 435,912         |
| Total Equity           | 1,377,946       | 1,253,681       | 2,956,069       | 2,864,959       |
| ROE                    | 7%              | 10%             | 3%              | 15%             |

Decomposed ROE = Profit Margin x Total Assets Turnover x Equity Multiplier

#### Profit Margin

|            |           |           |           |           |
|------------|-----------|-----------|-----------|-----------|
| Net Income | 99,811    | 123,574   | 91,110    | 435,912   |
| Sales      | 1,447,812 | 1,423,705 | 4,106,015 | 3,641,563 |
|            | 7%        | 9%        | 2%        | 12%       |

#### Total Assets Turnover Ratio

Sales

|        |           |           |           |           |
|--------|-----------|-----------|-----------|-----------|
| Sales  | 1,447,812 | 1,423,705 | 4,106,015 | 3,641,563 |
| Assets | 5,538,436 | 4,601,535 | 6,367,575 | 5,503,758 |
|        | 26%       | 31%       | 64%       | 66%       |

#### Equity Multiplier

|              |           |           |           |           |
|--------------|-----------|-----------|-----------|-----------|
| Assets       | 5,538,436 | 4,601,535 | 6,367,575 | 5,503,758 |
| Total Equity | 1,377,946 | 1,253,681 | 2,956,069 | 2,864,959 |
|              | 4.02      | 3.67      | 2.15      | 1.92      |

|          |    |     |    |     |
|----------|----|-----|----|-----|
| ROE TEST | 7% | 10% | 3% | 15% |
|----------|----|-----|----|-----|

**Share Trading Information****Clayhaus Tiles****MIGAYA TILES**

| 2015    | 2014    |
|---------|---------|
| Rs.'000 | Rs.'000 |

| 2015    | 2014    |
|---------|---------|
| Rs.'000 | Rs.'000 |

**Long Term Solvency Ratio**  
 (Financial Leverage Ratios)
**Total Debt Ratio**

|                             | Clayhaus Tiles     | MIGAYA TILES       |
|-----------------------------|--------------------|--------------------|
| Total Assets - Total Equity | 4,160,490          | 3,411,506          |
| Total Assets                | 5,538,436          | 6,367,575          |
|                             | <u>0.751203064</u> | <u>0.535762201</u> |
| Times                       | 0.727551541        | 0.479454038        |

**Debt-equity Ratio**

|              | Clayhaus Tiles     | MIGAYA TILES       |
|--------------|--------------------|--------------------|
| Total Debt   | 0.751203064        | 0.535762201        |
| Total Equity | 0.248796936        | 0.464237799        |
|              | <u>3.019342109</u> | <u>1.154068461</u> |
| Times        | 2.670418998        | 0.921059952        |

**Times Interest Earned**

|          | Clayhaus Tiles | MIGAYA TILES |
|----------|----------------|--------------|
| EBIT     | 195,105        | 383,051      |
| Interest | 68,387         | 252,894      |
|          | <u>2.85</u>    | <u>1.51</u>  |
|          | 5.15           | 4.76         |

**Conclusion**

ROE of both Companies for the recent year has been very unsatisfactory and which is even lower than the risk free rate. Therefore the management should look at the reasons for such a lower ROE.

|  |
|--|
| Decomposed ROE = Profit Margin x Total Assets Turnover x Equity Multiplier |
|--|

**(5 marks)**

**(b)**

| Learning Outcomes  |
|--|
| 1.2.2 Analyse financial results by using trends and ratios [including the DuPont analysis in financial statements across time/different companies/different accounting policies in appraising the short and long-term viability of the organisation (working capital issues such as overtrading and solutions to overtrading is expected to be discussed here)]. |

### **Net Profit margin**

The net profit margin for both Companies have been very unsatisfactory. Migaya group has posted a net profit margin of just 2% for the recent where as Clayhaus is reporting it at 7%.

### **Assets Turnover**

Migaya group is reporting much better assets turnover ratio of about 60% where as Clayhaus is operating at about 28% on average.

### **Equity Multiplier**

Equity Multiplier is at 4 times for Clayhaue where Migaya reports it at 2 times. This means that Clayhaus is highly geared than Migaya group.

In summary, the clear reason for lower ROE is the operational inefficiency displayed by both companies. The gross profit margin for both Companies operates around 26% and the drop in profitability is mainly due to higher admin, distribution and more significantly the finance costs. The Clayhaus is better in terms of finance cost compared their higher gearing and Migaya group profitability has significantly diluted to a massive fiancé cost figure.

### **Solvency Ratio Analysis.**

The conclusion made above can be established by the solvency ratios as well and Clayhaus is in a critical stage in terms of gearing. However the Migaya group is in a critical stage from interest cover perspective.

Therefore the senior management team should make a critical decision of their ability to improve the operational efficiency to come out of the situation and if the reason is due to industry pressure , accruing another company from the same industry creates a clear doubt.

**(5 marks)**

2.

|                   |
|-------------------|
| Learning Outcomes |
|-------------------|

|  |
|--|
| 3.1.2 Discuss dividend theories such as dividend irrelevancy theory, bird-in-hand theory, tax preference theory, residual theory and packing order theory. |
|--|

This is common question that arises around declaring dividends as opposed to investing within the business:

The finance Director's concern is about the dividend policy of the company.

Dividend policy is concerned with financial policies regarding paying [cash dividend](#) in the present or paying an increased dividend at a later stage. Whether to issue dividends and what amount, is determined mainly on the basis of the company's unappropriated profit (excess cash) and influenced by the company's long-term earning power. When cash surplus exists and is not needed by the firm, then management is expected to pay out some or all of those surplus earnings in the form of cash dividends.

The argument of not paying dividends will lead the share price to come down may not be correct if the growth opportunities exists for the company for a return that easily exceeds the cost of capital of shareholders.

If there are no NPV positive opportunities, i.e. projects where [returns](#) exceed the [hurdle rate](#), and excess cash surplus is not needed, then – finance theory suggests – management should return some or all of the excess cash to shareholders as dividends. This is the general case, however there are exceptions. For example, shareholders of a "[growth stock](#)", expect that the company will, almost by definition, retain most of the excess earnings so as to fund future growth internally. By withholding current dividend payments to shareholders, managers of growth companies are hoping that dividend payments will be increased proportionality higher in the future, to offset the retainment of current earnings and the internal financing of present investment projects.

Many firms choose to pay no dividends and these firms sell at positive prices. For example, most Internet firms, such as Amazon.com, Google, and eBay, pay no dividends. Rational shareholders believe that either they will receive dividends at some point or they will receive something just as good. That is, the firm will be acquired in a merger, with the stockholders receiving either cash or shares of stock at that time.

Empirical evidence suggests that firms with high growth rates are likely to pay lower dividends, a result consistent with the analysis here. For example, consider McDonald's Corporation. The company started in the 1950s and grew rapidly for many years. It paid its first dividend in 1975, though it was a billion-dollar company (in both sales and market value of stockholders' equity) prior to that date. Why did it wait so long to pay a dividend? It waited because it had so many positive growth opportunities (additional locations for new hamburger outlets) to take advantage of. In the Indian context also, there exist a large number of similar examples. The software giant, Infosys Limited, till a few years back, did not pay any dividends ensuring that all the earnings were reinvested for its growth

opportunities. High growth telecom companies, such as Tata Telecom and Bharti Airtel, are also examples of companies which have avoided paying dividends.

(6 marks)

3.

| Learning Outcomes  |
|--|
| 2.6.2 Calculate "Weighted Average Cost of Capital" (WACC). |

### Cost of Capital Calculation - Dividend Valuation Model

|  | Clayhaus Tiles<br>2015 | MIGAYA TILES<br>2015 |
|--|------------------------|----------------------|
| Stated Capital (Rs,000)                  | 156,000                | 2,289,750            |
| Number of shares                         | 90,000,000             | 212,850,000          |
| Total Equity including Reserves (Rs,000) | 1,377,946              | 2,956,069            |
| Earnings for the year after Tax (Rs,000) | 99,811                 | 91,110               |
| ROE                                      | 7%                     | 3%                   |
| DPS                                      | 0.55                   | 0                    |
| Total Dividends Paid (Rs,000)            | 49,500                 | 0                    |
| Share Price                              | 13.59                  | 14.6                 |
| Payout Ratio                             | 20%                    | 30%                  |
| Retention Ratio ( R)                     | 80%                    | 70%                  |
| Growth Rate (ROE X R)                    | 6%                     | 2%                   |

### Cost of Capital Calculation

$$R = \text{Div1}/\text{Po}+g$$

|                               |           |           |
|-------------------------------|-----------|-----------|
| Next Year Earnings            | 105,595   | 93,076    |
| Payout (Rs,000)               | 21,119    | 27,923    |
| DPS                           | 0.23      | 0.13      |
| $R = \text{Div1}/\text{Po}+g$ | <u>8%</u> | <u>3%</u> |

As mentioned earlier we can see that Migaya's cost of capital figure does not seem to be correctly calculated based on the dividend valuation method and necessary analysis is needed to see why the investors are still willing to pay a higher price and make necessary adjustments accordingly.

Therefore we can look at the CAPM based cost of capital as a more accurate valuation which is given below.

### Cost of Capital Calculation - CAPM

$$r_e = r_f + \beta(r_m - r_f)$$

where

$r_e$  = Required Return on Equity

$r_f$  = Risk-free Rate

$r_m$  = Market Return

$\beta$  = Stock Beta

$(r_m - r_f)$  = Equity Risk Premium

|                | Clayhaus Tiles<br>2015 | MIGAYA TILES<br>2014 |
|----------------|------------------------|----------------------|
| Risk Free Rate | 8%                     | 8%                   |
| Risk Premium   | 6.50%                  | 6.50%                |
| Beta Factor    | 1                      | 0.79                 |
| $r_e$          | 14.50%                 | 13.14%               |

**(6 marks)**

#### 4 (a)

| Learning Outcomes  |
|--|
| 2.3.4 Assess systematic (market-wide/non-diversifiable) and unsystematic risk (firm specific/diversifiable) and their implications on equity financing, from a company's viewpoint (beta factor and expected return) and an investor's view point (basic fundamentals of a diversified portfolio). |

Mergers or acquisitions sometimes happen because business firms want diversification. This is the reason why the Director – Risk and Governance was not happy about the acquisition. Because he was in the view that a diversification effect is not possible had this target being acquired.

Diversification is the reduction of risk through investment decisions. If a large, conglomerate firm thinks that it has too much exposure to risk because it has too much of its business invested in one particular industry, it may buy a business in another industry. That would provide a measure of diversification for the acquiring firm. In other words, the acquiring firm no longer has all its eggs in one basket.

There is a parameter to check the diversification effect and his correlation coefficient of +1.02 was such in determining the same. For example if the correlation coefficient is a positive figure the two stocks are moving in the same direction when the economic changes take place and if the coefficient is negative the return of two stocks will move in the opposite direction under different market conditions. This is the simple reason why he suggested finding a target with negative correlation coefficient to achieve the diversification effect. In other words the diversification reduces the unsystematic risk of an entity.

**(6 marks)**

#### 4(b)

| Learning Outcomes   |
|---|
| 2.3.4 Assess systematic (market-wide/non-diversifiable) and unsystematic risk (firm specific/diversifiable) and their implications on equity financing, from a company's viewpoint (beta factor and expected return) and an investor's viewpoint (basic fundamentals of a diversified portfolio). |

Given below are three main reasons why an entity would go for a merger of acquisition.

#### **Economies of scale.**

It is often thought that larger companies have lower unit costs, because fixed costs are spread more thinly. While there are almost certainly some savings to be made, particularly where the companies concerned are in the same industry, it should be remembered that diseconomies of scale are possible. A business may become too large, or a group of businesses too diverse, to be managed effectively. It may also be difficult to bring together two companies in such a way as to obtain all potential economies of scale.

#### **Diversification and risk.**

A group with interests in several different businesses will be less vulnerable to fluctuations in the fortunes of one business than a company which has only one business. Acquisition of existing businesses, which can be left under their existing management so long as performance remains satisfactory, may be the best way to diversify. On the other hand, shareholders can diversify their portfolios themselves, by investing in a wide range of companies each of which has a single business. It is therefore arguable that managers should concentrate on the success of their own businesses, rather than seeking to do the shareholders' work for them.

#### **Undervalued shares.**

If a company is really worth more than the price it can be bought at, its purchase would seem to be justified. However, a prospective purchaser should enquire carefully into the true value of the company. Its share price may be low because of justified doubts about its prospects. The reliability of information suggesting that a company is undervalued should be investigated, and one should ask why the market has not taken account of it. If it is because the information is not in the public domain, the risk of prosecution for insider dealing should not be ignored. On the other hand, if the information is public, it is possible that others have not realized its significance, and that the company is indeed undervalued.

As explained above the acquisition could go ahead even if the diversification effect is not possible but other benefits are bigger enough to compensate for the same. For example the dominance that Mogaya group can get in the tile industry would give them more benefits than the diversification effect. Which could compensate for the additional return that an investor would look for due to higher beta factor with lower diversification. Therefore the decision should not only be made based on the diversification factor.

**(3 marks)**

## 5.

| Learning Outcomes  |
|--|
| 5.2.5 Evaluate post-merger valuation and implications (market values, net asset values, EPS, P/E ratio before and after acquisition or merger), including post-acquisition integration, integration problems which cause merger/acquisition failure. |

**THEORITICAL MARKET PRICE - MIGAYA PLC**

| <u>Clayhaus PLC</u>                   |                                  | Rs. '000                |
|---------------------------------------|----------------------------------|-------------------------|
| Existing Market Capitalization        | (90 mn x 13.59)                  | 1,223,100               |
| P/E Ratio                             | (298,800 / 37,350) = Times 12.25 |                         |
| Existing equity earnings              |                                  | 99,811                  |
| Less/ Earnings from bathware division |                                  | - 6,000                 |
| Net earnings                          |                                  | <u>93,811</u>           |
| 20% efficiency                        |                                  | <u>18,762</u>           |
| New annual equity earnings            |                                  | <u><u>112,573</u></u>   |
| New Capitalization (P/E Based)        |                                  | 1,379,490               |
| VRS                                   |                                  | - 10,000                |
| Sale of bathware division             |                                  | <u>42,100</u>           |
|                                       |                                  | <u><u>1,411,590</u></u> |
| <br><u>Migaya PLC</u>                 |                                  |                         |
| Existing Market Capitalization        | (212.85 mn x 14.60)              | 3,107,610               |
| Property Sale                         |                                  | 75,200                  |
| Less/Reorganization Costs             |                                  | - 21,000                |
| Total Capitalization                  |                                  | <u><u>3,161,810</u></u> |
| <br>The Combined Capitalization       |                                  |                         |
| Clayhaus PLC                          |                                  | 1,411,590               |
| Migaya PLC                            |                                  | <u><u>3,161,810</u></u> |
|                                       |                                  | <u><u>4,573,400</u></u> |

Total number of shares after new shares in Company D      mn    302.85

New Shares Prices (Theoretical)

**Migaya PLC**       $\frac{4,573,400}{302,850}$       = Rs.    15.10

The market price of Migaya plc and Clayhouse Tiles plc before merger are Rs.14.60 and Rs.13.59 respectively. Since the theoretical share price is Rs.15.10 which is more than the existing market prices of both companies the merger would be beneficial.

**(8 marks)**

**6.**

| Learning Outcomes   |
|---|
| 2.6.1 Discuss alternative capital structures (traditional theory, Modigliani and Miller theories without and with tax). |

Modigliani and Miller, two professors in the 1950s, studied capital-structure theory intensely. From their analysis, they developed the capital-structure irrelevance proposition. Essentially, they hypothesized that in perfect markets, it does not matter what capital structure a company uses to finance its operations. They theorized that the market value of a firm is determined by its earning power and by the risk of its underlying assets, and that its value is independent of the way it chooses to finance its investments or distribute dividends. (Capital-Structure Irrelevance Proposition)

#### Modigliani and Miller's Capital-Structure Irrelevance Proposition

The M&M capital-structure irrelevance proposition assumes no taxes and no bankruptcy costs. In this simplified view, the weighted average cost of capital (WACC) should remain constant with changes in the company's capital structure. For example, no matter how the firm borrows, there will be no tax benefit from interest payments and thus no changes or benefits to the WACC. Additionally, since there are no changes or benefits from increases in debt, the capital structure does not influence a company's stock price, and the capital structure is therefore irrelevant to a company's stock price.

Therefore the basic M&M proposition is based on the following key assumptions:

- No taxes
- No transaction costs
- No bankruptcy costs
- Equivalence in borrowing costs for both companies and investors
- Symmetry of market information, meaning companies and investors have the same information
- No effect of debt on a company's earnings before interest and taxes

However, in the real world, there are taxes, transaction costs, bankruptcy costs, differences in borrowing costs, information asymmetries and effects of debt on earnings.

Therefore in the real world there is a greater question to which extent these assumptions can be taken as practical.

However, as we have stated, taxes and bankruptcy costs do significantly affect a company's stock price. In additional papers, Modigliani and Miller included both the effect of taxes and bankruptcy costs.

In summary, the MM I theory without corporate taxes says that a firm's relative proportions of debt and equity don't matter; MM I with corporate taxes says that the firm with the greater proportion of debt is more valuable because of the interest tax shield.

**(5 marks)**

7.

#### Learning Outcomes

2.3.1 Identify different types of capital markets (stock market, bond market and money market), advantages and disadvantages of stock market listing, and main stakeholders in the capital market and their functions (including viz., Colombo Stock Exchange, Securities and Exchange Commission, issuing house, brokers, primary dealers, money brokers, Central Depository System, underwriters).

### Methods of Raising Capital

#### Issue of Shares

It is the most important method. The liability of shareholders is limited to the face value of shares, and they are also easily transferable. A private company cannot invite the general public to subscribe for its share capital and its shares are also not freely transferable. But for public limited companies there are no such restrictions. There are two types of shares :-

- **Equity shares** :- the rate of dividend on these shares depends on the profits available and the discretion of directors. Hence, there is no fixed burden on the company. Each share carries one vote.
- **Preference shares** :- dividend is payable on these shares at a fixed rate and is payable only if there are profits. Hence, there is no compulsory burden on the company's finances. Such shares do not give voting rights.

#### Issue of Debentures

Companies generally have powers to borrow and raise loans by issuing debentures. The rate of interest payable on debentures is fixed at the time of issue and are recovered by a charge on the property or assets of the company, which provide the necessary security for payment. The company is liable to pay interest even if there are no profits. Debentures are mostly issued to finance the long-term requirements of business and do not carry any voting rights.

## **Loans from Financial Institutions**

Long-term and medium-term loans can be secured by companies from financial institutions.

## **Loans from Commercial Banks**

Medium-term loans can be raised by companies from commercial banks against the security of properties and assets. Funds required for modernisation and renovation of assets can be borrowed from banks. This method of financing does not require any legal formality except that of creating a mortgage on the assets.

## **Reinvestment of Profits**

Profitable companies do not generally distribute the whole amount of profits as dividend but, transfer certain proportion to reserves. This may be regarded as reinvestment of profits or ploughing back of profits. As these retained profits actually belong to the shareholders of the company, these are treated as a part of ownership capital. Retention of profits is a sort of self financing of business. The reserves built up over the years by ploughing back of profits may be utilised by the company for the following purposes :-

- Expansion of the undertaking
- Replacement of obsolete assets and modernisation.
- Meeting permanent or special working capital requirement.
- Redemption of old debts.

## **To Finance Short-Term Capital, Companies can use the following Methods :-**

### **Trade Credit**

Companies buy raw materials, components, stores and spare parts on credit from different suppliers. Generally suppliers grant credit for a period of 3 to 6 months, and thus provide short-term finance to the company. Availability of this type of finance is connected with the volume of business. When the production and sale of goods increase, there is automatic increase in the volume of purchases, and more of trade credit is available.

### **Factoring**

The amounts due to a company from customers, on account of credit sale generally remains outstanding during the period of credit allowed i.e. till the dues are collected from the debtors. The book debts may be assigned to a bank and cash realised in advance from the bank. Thus, the responsibility of collecting the debtors' balance is taken over by the bank on payment of specified charges by the company. This method of raising short-term capital is known as factoring. The bank charges payable for the purpose is treated as the cost of raising funds.

### **Discounting Bills of Exchange**

This method is widely used by companies for raising short-term finance. When the goods are sold on credit, bills of exchange are generally drawn for acceptance by the buyers of goods. Instead of holding the bills till the date of maturity, companies can discount them with commercial banks on payment of a charge known as bank discount. The rate of discount to be charged by banks is prescribed by the Reserve Bank of India from time to time. The amount of discount is deducted from the value of bills at the time of discounting. The cost of raising finance by this method is the discount charged by the bank.

### **Bank Overdraft and Cash Credit**

It is a common method adopted by companies for meeting short-term financial requirements. Cash credit refers to an arrangement whereby the commercial bank allows money to be drawn as advances from time to time within a specified limit. This facility is granted against the security of goods in stock, or promissory notes bearing a second signature, or other marketable instruments like Government bonds. Overdraft is a temporary arrangement with the bank which permits the company to overdraw from its current deposit account with the bank up to a certain limit. The overdraft facility is also granted against securities. The rate of interest charged on cash credit and overdraft is relatively much higher than the rate of interest on bank deposits

**( 6 marks )**

**(Total 50 mark)**