BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF BANKING AND FINANCE

ADVANCED CORPORATE FINANCE (BS420)

DURATION: THREE HOURS

JUN 2023

INSTRUCTIONS TO CANDIDATES:

1) Answer any **four** questions.
2) Credit will be given for correct and orderly presentation and all workings must be shown.
3) Start a new answer on a fresh page
4) Non-programmable scientific calculators can be used

QUESTION ONE

a) X Unlimited has the following information:

EPS = $4, CAPEX per share = $3.80, Depreciation per share = $2.90, Change in WC per share = $1.20, Debt ratio = 40% Earnings, Capex, Depreciation and WC are all expected to grow at 10% per year. The β coefficient during that period will be 0.9. The TB rate will be 30%, average return in the market is 45%.

Required

Calculate the value of the stock   (10)

b) Basket wonders (BW) expects sales of baskets of 6,000 units at $43.75 per baskets in the coming year. The company must meet the following costs; variable costs of $18.75 per unit, fixed costs are $100,000, interest of $20,000.

   Required:
   i.   Estimate the quantity break-even point for Basket wonders.   (3)
   ii.   Compute the firm's degree of operating leverage.   (3)
   iii. Calculate the firm's degree of financial leverage.   (3)
   iv.   Find the firm's degree of Total leverage.   (3)
   v.   Explain what happens to EPS when sales units increase by 20%.   (3)

[25 Marks]

QUESTION TWO

a) The World Bank collects information on the life expectancy of a person in each country ("Life expectancy at," 2013) and the fertility rate per woman in the country ("Fertility rate," 2013). The data for 15 randomly selected countries for the year 2013 are in Table 1 below

Table 1

Country	Fertility Rate x	Life expectancy y
1	1.7	77.2
2	5.8	55.4
3	2.2	69.9
4	2.1	76.4
5	1.8	75.0
6	2.0	78.2
7	2.6	73.0
8	2.8	70.8
9	1.4	82.6
10	2.6	68.9
11	1.5	81.0
12	6.9	54.2
13	6.8	54.4

Required:

  i.   Find a linear regression equation between fertility rate and life expectancy. (12)
  ii. Use the regression equation to find the life expectancy for a country that has a fertility rate of 2.7. (2)
  iii. Compute the standard error of the estimate. (4)
  iv. Calculate the sample coefficient of determination (r^2) and interpret result. (4)
  v.   Compute the sample coefficient of correlation. (3)

[25 marks]

QUESTION THREE

Discuss the various heuristics and biases related to behavioural finance and investments.

[25 Marks]

QUESTION FOUR

a) Critically evaluate the relevance of Prospect theory, Utility Theory and Cumulative Prospect theory in asset pricing (15)
b) Explain the three types of machine learning

[25 marks]

QUESTION FIVE

a) Describe any four key financial decisions in financial strategy. (4)

b) Explain what happens to financial strategy as a firm moves through the product life cycle and in relation to the Boston Matrix. (21)

[25 marks]

QUESTION SIX

ABC Company has a history of extra ordinary growth. Its growth rate is slowing down because it becoming a much larger company. Its products are maturing and facing stiff competition. The company does not pay dividends but has some free cash flows to equity. Current information reported this year 2019;

Revenue per share = $ 35   EPS = $ 12

CAPEX per share   = $ 4   Depreciation per share = $ 1.20

The high growth period is considered to be a transition period that will last for 4 years. The following are the inputs for the high growth period (forecasted);

ROE = 30%   Retention Ratio = 100%

The firm pays no dividends now and is unlikely to do so in the near future because its equity holders are more interested in capital gains than current dividends.

The market parameters during this period will be as follows;

1. $\beta = 1.4$ Rm = 30%   Rf = 20%
2. CAPEX, depreciation and revenues are expected to grow at the same rate as earnings
3. Working capital is expected to be maintained at 20% of revenues throughout the period
4. The debt ratio for this period will be low at 10%

After the transition period, the firm will enter a stable growth period. Inputs for the stable growth period;

1. Expected growth rate = 10%
2. Market parameters; $\beta = 0.9$ Rm = 30%   Rf = 20%
3. Because of the limited growth opportunities in the market, CAPEX should be substantially decreased, any capital expand will be offset by depreciation
4. Working capital is expected to remain at 20% of revenues which will grow at 10% per year
5. Debt ratio will increase to 40% as the company tries to leverage its earnings

Required:

Determine the value of the firm   [2

END OF EXAMINATION