UNIVERSITY OF SWAZILAND

DEPARTMENT OF BUSINESS MANAGEMENT

MAIN EXAMINATION PAPER DECEMBER 2017

DEGREE AND
YEAR OF STUDY : MASTER OF BUSINESS ADMINISTRATION

TITLE OF PAPER : CORPORATE FINANCE AND INVESMENT

COURSE CODE : ACF603

TOTAL MARKS : 100 MARKS

TIME ALLOWED : THREE (3) HOURS

INSTRUCTIONS :

1. This paper consists of **ten (10) numbered pages,** including this page and Appendix A which contains useful formulae.
2. There are **six (6)** questions of 20 marks each, answer **ANY FIVE (5)** questions.
3. Begin solution to each question on a new page.
4. Show all the necessary workings.
5. Round off as you deem appropriate.
6. Tables are attached for your use.

Note: You are reminded that in assessing your work, account will be taken of accuracy of the language and general quality of expression, together with layout and presentation of your answer.

THIS PAPER MUST NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR OR SUPERVISOR.

SPECIAL REQUIREMENT: FINANCIAL CALCULATOR

QUESTION 1 (20 marks: 18 minutes)

"In theory shareholders are expected to exercise control over managers through some disciplinary mechanisms...In practice these disciplinary mechanisms may not work."

Adapted from Aswath Damodaran (2006) Applied Corporate Finance p.49

Required:

With reference to the above quote, write an essay on corporate governance describing some disciplinary mechanisms shareholders can use to control managers and the limitations of these disciplinary mechanisms.

QUESTIONS 2

The latest financial statements of the Food Distribution Company (FDC) Ltd are as follows:

Statement of Comprehensive Income of FDC Ltd for the year ended 31 January 2017

	2016	2017
Turnover	150 000	175 000
Cost of Sales	94 000	114 000
Gross profit	56 000	61 000
Operating Expenses	24 000	38 000
Profit Before Interest & Tax	32 000	23 000
Interest paid	6 000	7 000
Profit Before Tax	26 000	16 000
Taxation	7 800	4 800
Net Profit After Tax	18 200	11 200
Dividend	9 100	5 600
Retained profit	9 100	5 600

Statement of Financial Position of FDC Ltd as at 31 January 2017

Equity & Liabilities		
Shareholder's Equity	32 225	37 825
Ordinary shares @ $1 each	10 000	10 000
Retained earnings	22 225	27 825
Liabilities	34 000	37 825
Long-term liabilities	16 000	17 225
Accounts Payable	8 500	9 500
Bank overdraft	9 500	11 100
Total Equity & Liabilities	**66 225**	**75 650**
Assets		
Non-current assets	37 225	39 600
Current assets	29 000	36 050
Inventory	11 000	14 975
Accounts Receivable	12 000	12 975
Cash	6 000	8 100
Total Assets	**66 225**	**75 650**

Required:

Through the calculation of relevant ratios, analyse the profitability of FDC Limited over the 2-year period. Your analysis must include a description of what each ratio measures.

[20 marks]

QUESTION 3

Part A

Malume is working out the value of his 80th birthday presents he has just received from his three grandchildren; Harry, Nkosi and Mary.

Harry's gift – Malume will receive E5 000 at the end of each of the next five years.
Mary's gift – Malume will receive E35 000 in 5 years' time.
Nkosi's gift – Malume will receive E7 500, E 15000 and E8 000 at end of year 2, 3 and 4 respectively.

Malume's required rate of return on these gifts is 10%.

Required:

Calculate the total value of Malume's gifts from his grandchildren.

(10 marks: 18 minutes)

Part B

Madhodha Khumalo currently owns 10 000 shares of Amanzi Bottling Company and requires a return of 20% on these shares. The entrance of new players in the water bottling industry has seriously affected Amanzi's operating performance. The company's research and development team has invented a new bottling machine and this will significantly cut the company's operating costs. As a result of this innovation, analysts expect Amanzi's earnings and dividends to grow by 20%, 15% and 10% in 2018, 2019 and 2020 respectively. Analysts expect that the dividends will grow at 5% from 2021 into the foreseeable future. In the just ended 2017 financial year Amanzi paid a dividend of E5.00 per share.

Required:

Calculate the value of Mr Khumalo's shares in Amanzi Bottling Company.

(10 marks: 18 minutes)

QUESTION 4

The board of Zama Zama Enterprises Limited (ZZEL) a computer software company wish to measure their cost of capital. They have gathered the following data:

Equity	The firm has s twenty million shares outstanding with a current market price of R6 per share. The risk-free rate is 15%, and the expected return on the market is 20%. The firm has a beta of 1.975.
Debt	The company has one hundred thousand 10-year 7% semi-annual coupon bonds (par value E1000 each) which have three and half years to maturity. The bonds are priced to sell at a Yield to Maturity of 5%.
Preference shares	The firm has five million, 12% irredeemable preference share with a par value of issues have a par value of E10 and are currently trading at E15.

The corporate tax rate is 30%.

Required:
Calculate ZZEL's WACC.

(20 marks: 36 minutes)

QUESTION 5

Crown Bank has a single banking office located in the central business district of a medium-sized town. As the population moved north to the suburbs, Crown Bank saw its share of local banking deposits and profits decline. The bank's vice president has proposed that Crown Bank try to reverse this trend by building a satellite branch in one of the new, affluent northern suburbs. He has presented the bank's executive committee with the following information:

- The initial cost of the new building and equipment will be E4 million.
- Based upon town planning surveys, Crown Bank expected to operate out of this branch for only 4 years, at the end of which time they expect to be able to sell the building and equipment for E1 million.
- The building and equipment will be depreciated over their 4-year life using straight-line depreciation to a zero balance.
- The bank's net working capital must be increased by E1 000 000 to accommodate the new branch. This net working capital will be liquidated and made available to the bank for other uses upon termination of the project.
- Based on customer surveys, population trends, competitor location and the experience that other banks have had with their branches, it is estimated that the annual revenue from the new branch will be E1 750 000 (before tax).
- The cost of the customer survey and other research into the viability of the move, totaled E500 000.
- The new branch will incur E900 000 per annum in operating expenses (excluding depreciation).
- The bank's marginal tax rate is 30% and its required rate of return on investments, such as this one, is 10%.
- All cash flows will occur at year-end, except for the initial cost of the building and equipment and the net working capital requirement, which will occur at the outset.

Required:

(a) Calculate the Net Present Value of the project and state the outcome of your calculations, regarding whether the proposal should be accepted or not by the committee.

Round off all factors to four decimal places and values to the nearest cent.

(20 marks: 36 minutes)

Hint: It is not necessary to draw up a table including all 4 years, or discount each year separately, when years 1 – 3 will be identical. Use your annuity formula!

QUESTION 6

SABMiller accepted a takeover proposal at the fifth time of asking on Tuesday after Anheuser-Busch InBev, the world's largest brewer, set out a cash and share package worth £68 billion.

After repeated rebuttals from its next largest rival, AB InBev said it was willing in principle to pay £44 in cash per SABMiller share, with a partial share alternative set at a discount and limited to 41% of the SABMiller shares.

http://ewn.co.za/2015/10/13/Brewers-SABMiller-and-AB-InBev-agree-44-pound-a-share-takeover

What are some different sources of gain from a merger between SAB Miller and AB-InBev?

(20 marks: 36 minutes)

APPENDIX A: SELECTED RATIOS AND FORMULAE

Quick Ratio = (Current Assets – Inventory) / Current Liabilities

ROA = NPAT / Total Assets

Current Ratio = Current Assets / Current Liabilities

Equity Multiplier = Total Assets / Equity

Inventory Turnover = Cost of Goods Sold / Inventory

Times Interest Earned = PBIT / Interest paid

Net Profit Margin = NPAT / Sales

P/E ratio = Market price per share / EPS

Total Debt ratio = Total debt / Total Assets

ROE = NPAT / Equity

Accounts receivable Period = Accounts Receivables / Sales x 360 days

Inventory period = Inventory / COGS x 360 days

Debt: Equity ratio = Total Debt / Total Equity

Total Asset Turnover = Sales / Total Assets

Cash ratio = Cash / Current Liabilities

ROE = PM x TAT x EM

FV of a lump sum $= PV \times (1 + r)^t$ **PV of a lump sum** $= FV / (1 + r)^t$

FV of annuity $= C \times \left[\frac{(1+r)^t - 1}{r}\right]$ PV of annuity $= C \times \left[\frac{1 - \frac{1}{(1+r)^t}}{r}\right]$

Bond Value $= C \times [1 - 1 / (1 + r)^t] / r + F / (1 + r)^t$

$P_0 = D_1 / (1 + r) + D_2 / (1 + r)^2 + \ldots\ldots D_t / (1 + r)^t + P_t / (1 + r)^t$

$R_E = \frac{D_0 (1 + g)}{P_0} + g$

$R_P = D / P_0$

$P_t = D_{t+1} / (R - g)$

$WACC = \left(\frac{E}{V} \times R_E\right) + \left(\frac{P}{V} \times R_P\right) + \left(\frac{D}{V} \times R_D \times (1 - T_c)\right)$

$R_E = R_F + \beta_E \times (R_M - R_F)$

$YTM = \frac{i + (F_d - V_d)/n}{(F_d + 2V_d)/3}$

Present value interest factor of an ordinary annuity of R1 per period at i% for n periods, PVIFA(i,n).																				
Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077	8.422	7.843	7.330	6.873	6.464	6.097	5.766	5.467	5.195	4.948
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.427	8.694	8.055	7.496	7.003	6.566	6.177	5.829	5.517	5.235	4.979
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.644	8.855	8.176	7.586	7.070	6.617	6.215	5.858	5.539	5.251	4.992
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.779	8.951	8.244	7.634	7.105	6.642	6.233	5.871	5.548	5.258	4.997
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.915	9.042	8.304	7.675	7.133	6.661	6.246	5.880	5.554	5.262	4.999

Present value interest factor of R1 per period at i% for n periods, PVIF(i,n).																				
Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059	0.047	0.038	0.030	0.024	0.020	0.016	0.013	0.010
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033	0.026	0.020	0.015	0.012	0.009	0.007	0.005	0.004
35	0.706	0.500	0.355	0.253	0.181	0.130	0.094	0.068	0.049	0.036	0.026	0.019	0.014	0.010	0.008	0.006	0.004	0.003	0.002	0.002
40	0.672	0.453	0.307	0.208	0.142	0.097	0.067	0.046	0.032	0.022	0.015	0.011	0.008	0.005	0.004	0.003	0.002	0.001	0.001	0.001
50	0.608	0.372	0.228	0.141	0.087	0.054	0.034	0.021	0.013	0.009	0.005	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000