MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

FACULTY OF AGRIBUSINESS MANAGEMENT AND APPLIED SOCIAL SCIENCES

DEPARTMENT: APPLIED ACCOUNTING SCIENCES

MODULE: FINANCIAL MANAGEMENT

CODE: ACCT415

SESSIONAL EXAMINATIONS

APRIL 2024

DURATION: 3 HOURS

EXAMINER: MS GWESU

INSTRUCTIONS

1. *There are 5 questions carrying 20 marks*
2. *Answer **All** questions*
3. *Start each question on a fresh page*

ADDITIONAL MATERIAL
Non-programmable calculators
Annuity tables and present value Tables

Question 1 [20 Marks]

   a) Clearly explain any *four* methods used to hedge foreign currency risk.   (15 marks)

   b) John (Pvt) Ltd is a company in Zimbabwe which is in a business of buying and selling cosmetics from Chorol Company in Zambia. The company buys goods on credit and pays later after 3months or 6 months.

   In January 2022, the John (Pvt) Ltd bought goods worth K650 000.00 from Chorol of which the invoice is payable in March 2022. The company borrow in USD for 3 months at an annual interest rate of 6% and can deposit in Kwacha for 3 months at 10% per annum.

   Spot rate is K25.5 – K26.4: USD1

   Required

   Calculate the money market hedge and the forward contract hedge.   (5 marks)

Question 2 [20 Marks]

Owing to the automation of securities trading on the Zimbabwe Stock Exchange, Alpha securities have decided to acquire a new market data and quotation system for its Harare branch. The system receives current market prices and other information from several online data sources and displays the information on a screen or stores it for latter retrieval by the firm's brokers. The system also permits customers to call up current quotes on terminals in the lobby.

The equipment costs $1 100 00, and, if purchased, Alpha could obtain a term loan for the full purchase price at 10% interest rate. The equipment will claim capital allowances as follows: year 1, 25%; year 2, 30%; year 3, 30%; year 4, 13%.

If the equipment is purchased, a 4-year maintenance contract will be signed for a cost of $25 000 for year 1 and in subsequent years maintenance cost will increase by 10% per year. Maintenance costs are payable at the beginning of each year. The equipment can be sold after 4 years at $125 000.

As an alternative to the borrow and buy plan, the equipment manufacturer informed Alpha Securities that it would be willing to write a 4 year operating lease on the equipment, including maintenance, for payments of $290 000 at the beginning of each year. Alpha Securities is in the 35% tax bracket.

Required

Evaluate whether Alpha Securities should lease or buy the securities automations system.

(20 marks)

Question 3 [20 marks]

Trevor company operates as a mining company in Shurungwi. The company is unquoted on the Zimbabwe sock exchange. Below is the statement of financial position as at 31 December 2022:

ASSETS	$
Non-current assets	
Buildings	2 000 000
Trucks	1 200 000
Motor Vehicles	200 000
Equipment	150 000
	3 550 000
Current assets	
Inventory	15 000
Receivables	37 000
	3 602 000
EQUITY & LIABILITIES	
Equity	
Ordinary share Capital	1 900 000
Retained Earnings	1 200 000
	3 100 000
Liabilities	

Non-current liabilities

Long term loan   400 000

Current liabilities

Payables   102 000

                                                          3 602 000

Additional information

1) Trevor Limited share capital as a nominal value of $0.50 each.

2) The net profit after tax as at that date was $250 000. Preference dividend and ordinary dividend were $50 000 and $60 000 respectively.

3) P/E ratio of a quoted company in the same industry as Trevor Limited was 8 and earnings yield of 10%.

4) The growth rate of the profit is 5%.

5) The replacement value of the equipment was $180 000, and the company is expected that $10 000 will be written off as bad debts. Value of the motor vehicle is revalued down by $10 000.

Required

Calculate the value of the company using:

i.   Asset based valuation.   (5 marks)

ii.   P/E ratio.   (5 marks)

iii.   Earnings yield   (3 marks)

b) Trevor company has 7% redeemable debt. The debt will be redeemed after 5years at its nominal value. The investors will require a rate of return of 10%.

Required

Calculate the value of the debt.   (7 marks)

Question 4 [20 Marks]

a) Describe the views of Miller and Modigliani on capital structure both with and without taxation and their assumptions. Clearly explaining the relationship between the value of the firm, the weighted average cost of capital and the cost of equity. Include diagrams as part of your explanations.   (14 marks)

b) Evaluate the Efficient Market Hypothesis (EMH) and its various forms.   (6 marks)

Question 5 [20 marks]

The finance manager is evaluating the financial feasibility of a new project. The project requires an initial investment of $500 000 and is expected to generate annual cash flows of $150 000 for the next five years. The discount rate is 12%.

Required

   a) Perform a sensitivity analysis by varying the discount rate from 10% to 14% in increments of 1%. Calculate the net present value of discount rate and determine the sensitivity of the project 's profitability to changes in the discount rate.

                                                                                    (16 marks)

   b) Based on your results of the sensitivity analysis, discuss the implication for the projects financial feasibility and decision making.

                                                                                    (4 marks)

END OF EXAMINATION

Annuity table

Present value of an annuity of 1, i.e. $\dfrac{1-(1+r)^{-n}}{r}$

Where r = discount rate

n = number of periods until payment

Periods					Discount rate (r)					
(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606

Periods					Discount rate (r)					
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.968	4.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675

Present value table

Present value of 1, i.e. $(1 + r)^{-n}$

Where   r = discount rate

         n = number of periods until payment

Periods	Discount rate (r)									
(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239

Periods	Discount rate (r)									
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065