UNIVERSITY OF BOLTON

INSTITUTE OF MANAGEMENT

BA (HONS) ACCOUNTANCY

SEMESTER 2 EXAMINATIONS 2021/2022

FINANCIAL MANAGEMENT

MODULE NO. ACC6003

Date: **Tuesday 17 May 2022** **Time: 10.00 – 1.00pm**

INSTRUCTIONS TO CANDIDATES:

There are 5 questions in this examination 4 questions to be answered as follows:

Answer ALL 3 questions in section A

Answer ONLY 1 question from section B

This is a closed book examination.

You must hand in this exam paper with your answer booklet.

(Discount tables and Formulae are attached at the back of this question paper)

University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

SECTION A – ANSWER ALL THREE QUESTIONS

Question 1

Davidson Plc is a UK based company who is an international manufacturer of meat products. The company is considering the launch of a new product next year. The Managing Director as asked you to conduct a sensitivity analysis using Net Present Value to calculate the expected return based on various levels market demand.

The following financial information is available:

		Low Demand	**Average Demand**	**High Demand**
Year 0	Investment	$1,000,000	$1,200,000	$1,500,000
Year 1	Cashflow before tax	$200,000	$700,000	$800,000
Year 2	Cashflow before tax	$500,000	$550,000	$700,000
Year 3	Cashflow before tax	$600,000	$500,000	$300,000

i. Capital allowances are available on the project at 25% and the corporation tax rate is 18%
ii. The company's cost of capital in money terms is expected to be 15%.
iii. The cost incurred in development of the new product amount to £240,000.
iv. The estimated useful life of the investment is 10 years.
v. Foreign Currency exchange rate $1.41: £1

Required:

(a) Calculate the net present value in £ (GBP) based on the three levels of demand, low, Medium and high.

(15 marks)

(b) Calculate the profitability index at the low, average and high levels of demand.

(4 marks)

(c) Critically comment the following statement, clearly explaining any technical terms contained within it or used by you 'Net Present Value is a superior form of investment appraisal technique.

(6 marks)

Total 25 marks

University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

Please turn the page

Question 2

Darlington is a public listed company and is considering a major investment. The company needs an appropriate discount rate on which to base investment decisions.
An analysis of its capital structure as revealed the following: -

i. The company has just paid a divided of £2.40 (ex div)
ii. The market capitalisation of its shares is £1m
iii. Shares in issue are 100,000.
iv. The company has £2m of redeemable loan note finance with a current market value of £98 (per £100 nominal). Interest is payable for the next three years at 8% and are to be redeemed in cash at a 10% premium at the end of three years.
v. The corporation tax rate is expected to be 25% for the foreseeable future.

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Required:

(a) Calculate the companies Weighted Average Cost of Capital (WACC).

(10 marks)

(b) Discuss Modigliani and Millers theory of company valuation of a levered and unlevered Company.

(10 marks)

(c) Briefly explain how the Capital Asset Pricing Model uses risk to calculate a return on equity.

(5 marks)

(Total: 25 marks)

Please turn the page

University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

Question 3

Prudent Retail Company is reviewing its credit control policy due to increasing interest rates. The Credit Controller has asked for your help to ascertain the impact of extended credit terms in light of increasing levels of trading.

The following information is available

	Scenario 1	Scenario 2	Scenario 3
Receivable's days	30 days	60 days	90 days
Interest rate	5%	6%	8%

Annual Sales on credit are expected to generate is £1,000,000

On average the company generates £10,000 per month excess cash, which it intends to invest in short term securities. The interest it can earn is 5% per annum. The transaction cost with each investment of funds is £50.

Required:

1. Assuming that Prudent extends the level of credit from its present credit terms 30 days to 60 days and to 90 days, calculate the extra cost of finance.

(10 Marks)

2. Using the Baumol model calculate the amount of cash to be invested in each transaction.

(6 Marks)

3. Evaluate the Miller-Orr Cash Management Model.

(9 Marks)

Total 25 marks

University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

Please turn the page

SECTION B – ANSWER ONE QUESTION ONLY

Question 4

The Managing Director of a Fife Plc has asked you to advise on the management of its foreign exchange exposure at the next Board Meeting. In preparation for the meeting, you are required to write a briefing paper that answers to following questions:-

Required:

(a) Critically discuss the terms
   i. Transaction risk
   ii. Economic Risk
   iii. Translation Risk

(12 marks)

(b) Discuss three techniques a company might use to hedge against the foreign exchange risk involved in foreign trade.

(13 marks)

Total 25 marks

Question 5

Jake Plc has been approached by an investor who is interested in buying the company. The Board of Directors is unsure as to how to value the company.

Required:

1. Critically discuss the different types of valuation methods available to the company.

Total 25 marks

University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

End of Examination

PLEASE TURN OVER FOR DISCOUNT TABLES AND FORMULAE

FORMULAE AND TABLES

Economic order quantity

$$= \sqrt{\frac{2C_oD}{C_H}}$$

Miller-Orr Model

$$\text{Return point} = \text{Lower limit} + \left(\frac{1}{3} \times \text{spread}\right)$$

$$\text{Spread} = 3\left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}}\right]^{1/3}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i\,(E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d\,(1-T))}\,\beta_e\right] + \left[\frac{V_d\,(1-T)}{V_e + V_d\,(1-T))}\right]\beta_d$$

The Growth Model

$$P_0 = \frac{D_0(1+g)}{(r_e - g)} \qquad r_e = \frac{D_0(1+g)}{(P_0)} + g$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{(V_e + V_d)}\right] K_e + \left[\frac{V_d}{V_e + V_d}\right] K_d\,(1-T)$$

The Fisher formula

$$(1+i) = (1+r)(1+h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 \times \frac{(1+h_c)}{(1+h_b)} \qquad F_0 = S_0 \times \frac{(1+i_c)}{(1+i_b)}$$

University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

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University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

Present value table

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

Where r = discount rate

n = number of periods until payment

Periods (n)	Discount rate (r)									
	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 (n)	Discount rate (r)									
	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

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University of Bolton
Institute of Management
BA (Hons) Accountancy
Semester 2 Examination 2021/22
Financial Management
Module No. ACC6003

Annuity table

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

Where r = discount rate

n = number of periods until payment

Periods (n)	Discount rate (r)									
	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 (n)	Discount rate (r)									
	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

FORMULAE AND TABLES

Economic order quantity

$$= \sqrt{\frac{2C_oD}{C_H}}$$

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