Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2014/2015

COURSE NAME	:	FINANCIAL AND INVESTMENT MANAGEMENT
COURSE CODE	:	BPB 23403
PROGRAMME	:	2 BPA
EXAMINATION DATE	:	JUNE 2015/JULY 2015
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **TEN (10)** PAGES

Q1 (a) Define the following terminologies for bond valuation.

(i) Par Value (M)

(2 marks)

(ii) Coupon Interest Rate (I)

(2 marks)

(iii) Maturity (n)

(2 marks)

(b) IAM Berhad has issued a 12.5% bond that is to mature in nine years. The bond had a RM1,000 par value, and interest is due to be paid semiannually. Your required rate of return is 11.5%.

Calculate the price that you would be willing to pay for the bond.

(6 marks)

(c) MaxTone Berhad plans to issue bonds to expand its operations. The bonds will have a par value of RM1,000, a 10-year maturity, and a coupon interest rate of 9%. In the current market conditions, the bonds will be sold to net RM937.79.

Determine the followings:

(i) Current yield

(3 marks)

(ii) Yield-to-maturity

(5 marks)

Q2 Carter Paving plans to purchase a new grader. The one under consideration costs RM250,000 and has a depreciable life of five years. After-tax cash flows are expected to be RM67,124 in each of the five years and nothing thereafter. The firm's cost of capital is 9.5%.

Calculate the followings:

(a) Payback period.

(3 marks)

(b) Discounted payback period.

(5 marks)

(c) Net Present Value (NPV).

(3 marks)

(d) Profitability Index (PI).

(3 marks)

(e) Internal Rate of Return (IRR).

(6 marks)

Q3 (a) The common stock for IDG Berhad currently sells for RM40 per share. If a new issue is sold, the flotation cost is estimated to be RM7 per share. The company had earnings of RM2.00 per share four years ago. Next year, the company expects to have earnings of RM3.22 per share. The company maintains a constant dividend payout ratio of 40%. Earnings per share are anticipated to grow at the same rate in the future. The firm's marginal tax rate is 30%.

(i) Determine the growth rate.

(2 marks)

(ii) Compute the cost of internal equity capital.

(3 marks)

(iii) Calculate the cost of external equity capital.

(3 marks)

(b) MDG Berhad's preferred stock is selling for RM19.20 a share. The firm nets RM18.40 after issuance costs. The stock pays an annual dividend of RM2.21 per share.

Determine the cost of preferred stock to the company.

(3 marks)

(c) GameX Berhad is issuing a RM1,000 par value bond with an 8% annual interest coupon rate and that matures in 11 years. Investors are willing to pay RM972, and flotation costs will be 9%. Gibson is in the 34% tax bracket.

Calculate the after-tax cost of debt of the bond.

(4 marks)

(d) Dynasty Steel Berhad has RM2,575,000 of debt, RM550,000 of preferred stock, and RM18,125,000 of common equity. Dynasty Steel's after-tax cost of debt is 5.25%, preferred stock has a cost of 6.35%, and newly issued common stock has a cost of 14.05%.

Determine the firm weighted average cost of capital.

(5 marks)

Q4 (a) Explain **THREE (3)** advantages of commercial paper.

(6 marks)

(b) DynaMax Berhad is planning to issue RM5 million in 180-day maturity notes earning a rate of 12% per annum. The company expects to incur costs of approximately RM20,000 in dealer placement fees and other expenses of issuing the commercial paper. The company plans to back up their commercial paper offering with a line of credit from a bank for RM5 million. The compensating balance requirement is 10% of the line of credit. The company normally maintains RM450,000 in its accounts with the bank.

Determine the effective cost of the commercial paper.

(4 marks)

(c) Milestone Berhad called for credit at the MyNet Bank Berhad. The terms included a RM35,000 maximum loan with interest of 1% over prime, and the agreement also requires a 15% compensating balance throughout the year. The prime rate is currently 12%.

(i) Calculate the effective rate of interest on the loan.

(4 marks)

(ii) Recalculate the effective rate of interest on the loan if the company will have to borrow the compensating balance and the maximum amount possible under the agreement.

(3 marks)

(iii) In addition to the compensating balance requirement in (c)(ii), the company are told that interest will be discounted.

Calculate the effective rate of interest on the loan.

(3 marks)

Q5 (a) Define the followings:

(i) Forward exchange rates.

(2 marks)

(ii) Spot exchange rates.

(2 marks)

(iii) Exchange rate risk.

(2 marks)

(b) Differentiate between direct and indirect quote.

(4 marks)

(c) The following **Table Q5(c)** contains information on Selling Quotes for Foreign Currencies in New York.

Table Q5(c) Selling Quotes for Foreign Currencies in New York.

Country-Currency	Contract	USD/Foreign
Canada – Dollar	Spot 30-day 90-day	0.8437 0.8417 0.8395
Japan – Yen	Spot 30-day 90-day	0.004684 0.004717 0.004781
Switzerland – Franc	Spot 30-day 90-day	0.5139 0.5169 0.5315

(i) Compute the indirect quote for the spot and forward Canadian Dollar, Yen, and Swiss Franc contracts.

(3 marks)

(ii) The spreads on the contracts as a percent of the asked rates are 2 percent for Yen, 3 percent for Canadian Dollars, and 5 percent for Swiss Francs.

Determine the bid rates for the different spot and forward rates.

(3 marks)

(iii) You own USD10,000. The USD rate in Tokyo is 216.6743. The Yen rate in New York is given in the **Table Q5(c)**.

Calculate the gain (loss) for the arbitrage scheme with your capital.

(4 marks)

- END OF QUESTIONS –

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$FV_n = AMT\ (1+i)^n$ or $AMT\ (FVIF_{i,n})$

$PV = AMT\ (1+i)^{-n}$ or $AMT\ (PVIF_{i,n})$

$FVA = AMT\ (FVIFA_{i,n})$

$$FVIFA_{i,n} = \left[\frac{(1+i)^n - 1}{i}\right]$$

$PVA = AMT\ (PVIFA_{i,n})$

$$PVIFA_{i,n} = \left[\frac{1-(1+i)^{-n}}{i}\right]$$

$$NPV = \sum_{t=1}^{n} \frac{FCF_t}{(1+k)^t} - IO$$

$$PI = \frac{\sum_{t=1}^{n} \frac{FCF_t}{(1+k)^t}}{IO}$$

$$IRR = IRR_1 + \left[\frac{PV_1 - IO}{PV_1 - PV_2} \text{ x } (IRR_2 - IRR_1)\right]$$

$$V_b = \$I_t(PVIFA_{k,n}) + \$M(PVIF_{k,n})$$

$$V_b = \sum_{t=1}^{n} \frac{\$I_t}{(1+k_b)^t} + \frac{\$M}{(1+k_b)^n}$$

$$V_{ps} = \frac{D}{k_{ps}}$$

$$V_{cs} = \frac{D_1}{k_{cs} - g}$$

$$V_{cs} = \frac{D_1}{(1+k_{cs})} + \frac{P_1}{(1+k_{cs})}$$

$$k_d = \frac{C + \frac{Par - Net\ Price}{n}}{\frac{Par + Net\ Price}{2}}$$

After-tax cost of debt = $k_d(1-T)$

$$K_{ps} = \frac{D}{NP}$$

$$\bar{k}_{cs} = \frac{D_1}{P_0} + g$$

$$k_{ncs} = \frac{D_1}{NP_{cs}} + g$$

$$k_{wacc} = w_d k_d (1-T_c) + w_{ps} k_{ps} + w_{ncs} k_{ncs}$$

$$k_i = k_{rf} + \beta_i (k_m - k_{rf})$$

$$\bar{k} = \sum_{t=1}^{n} k_i P(k_i)$$

$$\sigma = \sqrt{\sum_{t=1}^{n} (k_i - \bar{k})^2 P(k)_i}$$

$$APR = \frac{\text{interest}}{\text{principle x time}} \quad or$$

$$APR = \frac{\text{interest}}{\text{principle}} \text{ x } \frac{1}{\text{time}}$$

$$APY = \left[1 + \frac{i}{m}\right]^m - 1$$

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Present Value Table

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%
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
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
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
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
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
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
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
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
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	**0.294**	0.283	0.243
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**	**0.206**
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
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
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
14	0.870	0.758	0.661	0.577	**0.506**	0.442	0.388	0.340	0.299	**0.263**	0.232	0.205	0.181	0.160	**0.141**	0.125	0.111
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
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
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
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
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
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**
21	0.811	0.660	0.538	0.439	**0.359**	0.294	0.242	0.199	0.164	**0.135**	0.112	0.093	0.077	0.064	**0.053**	0.044	0.037
22	0.803	0.647	0.522	0.422	**0.342**	0.278	0.226	0.184	0.150	**0.123**	0.101	0.083	0.068	0.056	**0.046**	0.038	0.032
23	0.795	0.634	0.507	0.406	**0.326**	0.262	0.211	0.170	0.138	**0.112**	0.091	0.074	0.060	0.049	**0.040**	0.033	0.027
24	0.788	0.622	0.492	0.390	**0.310**	0.247	0.197	0.158	0.126	**0.102**	0.082	0.066	0.053	0.043	**0.035**	0.028	0.023
25	0.780	0.610	0.478	0.375	**0.296**	0.233	0.184	0.146	0.116	**0.092**	0.074	0.059	0.047	0.038	**0.030**	0.024	0.020
26	0.772	0.598	0.464	0.361	**0.281**	0.220	0.172	0.135	0.106	**0.084**	0.066	0.053	0.042	0.033	**0.026**	0.021	0.017
27	0.764	0.586	0.450	0.347	**0.268**	0.207	0.161	0.125	0.098	**0.076**	0.060	0.047	0.037	0.029	**0.023**	0.018	0.014
28	0.757	0.574	0.437	0.333	**0.255**	0.196	0.150	0.116	0.090	**0.069**	0.054	0.042	0.033	0.026	**0.020**	0.016	0.012
29	0.749	0.583	0.424	0.321	**0.243**	0.185	0.141	0.107	0.082	**0.063**	0.048	0.037	0.029	0.022	**0.017**	0.014	0.011
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**
31	0.735	0.541	0.400	0.296	**0.220**	0.164	0.123	0.092	0.069	**0.052**	0.039	0.030	0.023	0.017	**0.013**	0.010	0.008
32	0.727	0.531	0.388	0.285	**0.210**	0.155	0.115	0.085	0.063	**0.047**	0.035	0.027	0.020	0.015	**0.011**	0.009	0.007
33	0.720	0.520	0.377	0.274	**0.200**	0.146	0.107	0.079	0.058	**0.043**	0.032	0.024	0.018	0.013	**0.010**	0.007	0.006
34	0.713	0.510	0.366	0.264	**0.190**	0.138	0.100	0.073	0.053	**0.039**	0.029	0.021	0.016	0.012	**0.009**	0.006	0.005
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
36	0.699	0.490	0.345	0.244	**0.173**	0.123	0.088	0.063	0.045	**0.032**	0.023	0.017	0.012	0.009	**0.007**	0.005	0.004
37	0.692	0.481	0.335	0.234	**0.164**	0.116	0.082	0.058	0.041	**0.029**	0.021	0.015	0.011	0.008	**0.006**	0.004	0.003
38	0.685	0.471	0.325	0.225	**0.157**	0.109	0.076	0.054	0.038	**0.027**	0.019	0.013	0.010	0.007	**0.005**	0.004	0.003
39	0.678	0.462	0.316	0.217	**0.149**	0.103	0.071	0.050	0.035	**0.024**	0.017	0.012	0.009	0.006	**0.004**	0.003	0.002
40	**0.672**	**0.453**	**0.307**	**0.206**	**0.142**	**0.097**	**0.067**	**0.046**	**0.032**	**0.022**	**0.015**	**0.011**	**0.006**	**0.005**	**0.004**	**0.003**	**0.002**

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Present Value of an Annuity Table

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%
1	0.990	0.980	0.971	0.962	**0.962**	0.943	0.935	0.926	0.917	**0.909**	0.901	0.893	0.885	0.877	**0.870**	0.862	0.855
2	1.970	1.942	1.913	1.885	**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
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
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
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
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
7	6.728	6.472	6.230	6.002	**5.796**	5.582	5.389	5.206	5.033	**4.968**	4.712	4.564	4.423	4.288	**4.160**	4.039	3.922
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
9	8.566	8.162	7.786	7.435	**7.108**	6.802	6.515	6.247	5.995	**6.759**	5.537	5.328	5.132	4.946	**4.772**	4.607	4.451
10	**9.471**	**8.963**	**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**	**4.669**
11	10.368	9.787	9.253	8.760	**8.306**	7.887	7.499	7.139	6.805	**6.496**	6.207	5.938	5.687	5.453	**5.234**	5.029	4.836
12	11.255	10.575	9.954	9.385	**9.863**	8.384	7.943	7.536	7.161	**6.914**	6.492	6.194	5.918	5.660	**5.421**	5.197	4.988
13	12.134	11.348	10.635	9.986	**9.384**	8.853	8.358	7.904	7.487	**7.103**	6.750	6.424	6.122	5.842	**5.583**	5.342	5.118
14	13.004	12.106	11.296	10.563	**9.800**	9.295	8.745	8.244	7.786	**7.387**	6.982	6.628	6.302	6.002	**5.724**	5.468	5.229
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	**5.947**	5.575	5.324
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	**5.964**	5.668	5.405
17	15.582	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
18	16.396	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
19	17.226	15.678	14.324	13.134	**12.085**	11.158	10.336	9.604	8.950	**8.366**	7.839	7.366	6.938	6.550	**6.196**	5.877	5.584
20	**18.046**	**16.351**	**14.877**	**13.590**	**12.462**	**11.470**	**10.594**	**9.818**	**9.129**	**8.514**	**7.963**	**7.489**	**7.025**	**6.623**	**6.259**	**5.929**	**5.628**
21	18.857	17.011	15.415	14.029	**12.821**	11.764	10.836	10.017	9.292	**8.649**	8.075	7.562	7.102	6.687	**6.312**	5.973	5.665
22	19.660	17.658	15.937	14.451	**13.163**	12.042	11.061	10.201	9.442	**8.772**	8.176	7.645	7.170	6.743	**6.359**	6.011	5.696
23	20.456	18.292	16.444	14.857	**13.499**	12.303	11.272	10.371	9.580	**8.883**	8.266	7.718	7.230	6.792	**6.399**	6.044	5.723
24	21.243	18.914	16.936	15.247	**13.799**	12.550	11.469	10.529	9.707	**8.965**	8.348	7.784	7.283	6.835	**6.434**	6.073	5.746
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
26	22.795	20.121	17.877	15.963	**14.375**	13.003	11.826	10.810	9.929	**9.161**	8.488	7.896	7.372	6.906	**6.491**	6.118	5.783
27	23.560	20.707	18.327	16.330	**14.643**	13.211	11.987	10.935	10.027	**9.237**	8.546	7.943	7.409	6.935	**6.541**	6.136	5.796
28	24.316	21.281	18.764	16.663	**14.996**	13.406	12.137	11.051	10.116	**9.307**	8.602	7.984	7.441	6.961	**6.534**	6.152	5.810
29	25.066	21.844	19.188	16.984	**15.141**	13.591	12.278	11.158	10.198	**9.370**	8.650	8.022	7.470	6.983	**6.551**	6.166	5.820
30	**25.806**	**22.396**	**19.800**	**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**
31	26.542	22.938	20.000	17.588	**15.593**	13.929	12.532	11.350	10.343	**9.479**	8.733	8.085	7.518	7.020	**6.579**	6.187	5.837
32	27.270	23.468	20.389	17.874	**15.803**	14.084	12.647	11.435	10.406	**9.526**	8.769	8.112	7.538	7.035	**6.591**	6.196	5.844
33	27.990	23.989	20.766	18.148	**16.003**	14.230	12.754	11.514	10.464	**9.569**	8.801	8.135	7.556	7.048	**6.600**	6.203	5.846
34	28.703	24.499	21.132	18.411	**16.193**	14.368	12.854	11.587	10.518	**9.609**	8.829	8.157	7.572	7.060	**6.609**	6.210	5.854
35	29.409	24.999	21.487	18.665	**16.374**	14.498	12.948	11.655	10.587	**9.644**	8.855	8.176	7.588	7.070	**6.617**	6.215	5.858
36	30.108	25.489	21.832	18.908	**16.547**	14.621	13.035	11.717	10.612	**9.677**	8.879	8.192	7.598	7.079	**6.623**	6.220	5.882
37	30.800	25.969	22.167	19.143	**16.711**	14.737	13.117	11.775	10.653	**9.706**	8.900	8.208	7.609	7.087	**6.629**	6.224	5.865
38	31.485	26.441	22.492	19.368	**16.968**	14.846	13.193	11.829	10.691	**9.733**	8.919	8.221	7.618	7.094	**6.634**	6.228	5.867
39	32.163	26.903	22.808	19.584	**17.017**	14.949	13.265	11.879	10.726	**9.757**	8.936	8.233	7.627	7.100	**6.638**	6.231	5.869
40	**32.835**	**27.355**	**23.115**	**19.793**	**17.169**	**15.046**	**13.332**	**11.925**	**10.757**	**9.779**	**8.961**	**8.244**	**7.634**	**7.106**	**6.642**	**6.233**	**5.871**

FINAL EXAMINATION

SEMESTER/SESSION: SEM II/2014-2015 PROGRAMME: 2BPA
COURSE NAME: FINANCIAL & INVESTMENT MANAGEMENT COURSE CODE: BPB23403

Future Value Tabl

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%
1	1.010	1.020	1.030	1.040	**1.050**	1.060	1.070	1.080	1.090	**1.100**	1.110	1.120	1.130	1.140	**1.150**	1.160	1.170
2	1.020	1.040	1.061	1.082	**1.103**	1.124	1.145	1.166	1.188	**1.210**	1.232	1.254	1.277	1.300	**1.323**	1.346	1.369
3	1.030	1.061	1.093	1.125	**1.158**	1.191	1.225	1.260	1.295	**1.331**	1.368	1.405	1.443	1.482	**1.521**	1.561	1.602
4	1.041	1.082	1.126	1.170	**1.216**	1.262	1.311	1.360	1.412	**1.464**	1.518	1.574	1.630	1.689	**1.749**	1.811	1.874
5	1.051	1.104	1.159	1.217	**1.276**	1.338	1.403	1.469	1.539	**1.611**	1.685	1.762	1.842	1.925	**2.011**	2.100	2.192
6	1.062	1.126	1.194	1.265	**1.340**	1.419	1.501	1.587	1.677	**1.772**	1.870	1.974	2.082	2.195	**2.313**	2.436	2.565
7	1.072	1.149	1.230	1.316	**1.407**	1.504	1.606	1.714	1.828	**1.949**	2.076	2.211	2.353	2.502	**2.660**	2.826	3.001
8	1.083	1.172	1.267	1.369	**1.477**	1.594	1.718	1.851	1.993	**2.144**	2.305	2.476	2.658	2.853	**3.059**	3.278	3.511
9	1.094	1.195	1.305	1.423	**1.551**	1.689	1.838	1.999	2.172	**2.358**	2.558	2.773	3.004	3.252	**3.518**	3.803	4.108
10	**1.105**	**1.218**	**1.344**	**1.480**	**1.629**	**1.791**	**1.967**	**2.159**	**2.367**	**2.594**	**2.839**	**3.106**	**3.395**	**3.707**	**4.046**	**4.411**	**4.807**
11	1.116	1.243	1.384	1.539	**1.710**	1.898	2.105	2.332	2.580	**2.853**	3.152	3.479	3.836	4.226	**4.652**	5.117	5.624
12	1.127	1.268	1.426	1.601	**1.796**	2.012	2.252	2.518	2.813	**3.138**	3.498	3.896	4.335	4.818	**5.350**	5.936	6.580
13	1.138	1.294	1.469	1.665	**1.886**	2.133	2.410	2.720	3.066	**3.452**	3.883	4.363	4.898	5.492	**6.153**	6.886	7.699
14	1.149	1.319	1.513	1.732	**1.980**	2.261	2.579	2.937	3.342	**3.797**	4.310	4.887	5.535	6.261	**7.076**	7.988	9.007
15	1.161	1.346	1.558	1.801	**2.079**	2.397	2.759	3.172	3.642	**4.177**	4.785	5.474	6.254	7.138	**8.137**	9.266	10.539
16	1.173	1.373	1.605	1.873	**2.183**	2.540	2.952	3.426	3.970	**4.595**	5.311	6.130	7.067	8.137	**9.358**	10.748	12.330
17	1.184	1.400	1.653	1.948	**2.292**	2.693	3.159	3.700	4.328	**5.054**	5.895	6.866	7.986	9.276	**10.761**	12.468	14.426
18	1.196	1.428	1.702	2.026	**2.407**	2.854	3.380	3.996	4.717	**5.560**	6.544	7.690	9.024	10.575	**12.375**	14.463	16.879
19	1.208	1.457	1.754	2.107	**2.527**	3.026	3.617	4.316	5.142	**6.116**	7.263	8.613	10.197	12.056	**14.232**	16.777	19.748
20	**1.220**	**1.486**	**1.806**	**2.191**	**2.653**	**3.207**	**3.870**	**4.661**	**5.604**	**6.727**	**8.062**	**9.646**	**11.523**	**13.743**	**16.367**	**19.461**	**23.106**
21	1.232	1.516	1.860	2.279	**2.786**	3.400	4.141	5.034	6.109	**7.400**	8.949	10.804	13.021	15.668	**18.822**	22.574	27.034
22	1.245	1.546	1.916	2.370	**2.925**	3.604	4.430	5.437	6.659	**8.140**	9.934	12.100	14.714	17.861	**21.645**	26.186	31.629
23	1.257	1.577	1.974	2.465	**3.072**	3.820	4.741	5.871	7.258	**8.954**	11.026	13.552	16.627	20.362	**24.891**	30.376	37.006
24	1.270	1.608	2.033	2.563	**3.225**	4.049	5.072	6.341	7.911	**9.850**	12.239	15.179	18.788	23.212	**28.625**	35.236	43.297
25	1.282	1.641	2.094	2.666	**3.386**	4.292	5.427	6.848	8.623	**10.835**	13.585	17.000	21.231	26.462	**32.919**	40.874	50.658
26	1.295	1.673	2.157	2.772	**3.556**	4.549	5.807	7.396	9.399	**11.918**	15.080	19.040	23.991	30.167	**37.857**	47.414	59.270
27	1.308	1.707	2.221	2.883	**3.733**	4.822	6.214	7.988	10.245	**13.110**	16.739	21.325	27.109	34.390	**43.535**	55.000	69.345
28	1.321	1.741	2.288	2.999	**3.920**	5.112	6.649	8.627	11.167	**14.421**	18.580	23.884	30.633	39.204	**50.066**	63.800	81.134
29	1.335	1.776	2.357	3.119	**4.116**	5.418	7.114	9.317	12.172	**15.863**	20.624	26.750	34.616	44.693	**57.575**	74.009	94.927
30	**1.348**	**1.811**	**2.427**	**3.243**	**4.322**	**5.743**	**7.612**	**10.063**	**13.268**	**17.449**	**22.892**	**29.960**	**39.116**	**50.950**	**66.212**	**85.850**	**111.065**
31	1.361	1.848	2.500	3.373	**4.538**	6.088	8.145	10.868	14.462	**19.194**	25.410	33.555	44.201	58.083	**76.144**	99.586	129.946
32	1.375	1.885	2.575	3.508	**4.765**	6.453	8.715	11.737	15.763	**21.114**	28.206	37.582	49.947	66.215	**87.565**	115.520	152.036
33	1.389	1.922	2.652	3.648	**5.003**	6.841	9.325	12.676	17.182	**23.225**	31.308	42.092	56.440	75.485	**100.700**	134.003	177.883
34	1.403	1.961	2.732	3.794	**5.253**	7.251	9.978	13.690	18.728	**25.548**	34.752	47.143	63.777	86.053	**115.805**	155.443	208.123
35	1.417	2.000	2.814	3.946	**5.516**	7.686	10.677	14.785	20.414	**28.102**	38.575	52.800	72.069	98.100	**133.176**	180.314	243.503
36	1.431	2.040	2.898	4.104	**5.792**	8.147	11.424	15.968	22.251	**30.913**	42.818	59.136	81.437	111.834	**153.152**	209.164	284.899
37	1.445	2.081	2.985	4.268	**6.081**	8.636	12.224	17.246	24.254	**34.004**	47.528	66.232	92.024	127.491	**176.125**	242.631	333.332
38	1.460	2.122	3.075	4.439	**6.385**	9.154	13.079	18.625	26.437	**37.404**	52.756	74.180	103.987	145.340	**202.543**	281.452	389.998
39	1.474	2.165	3.167	4.616	**6.705**	9.704	13.995	20.115	28.816	**41.145**	58.559	83.081	117.506	165.687	**232.925**	326.484	456.298
40	**1.489**	**2.208**	**3.262**	**4.801**	**7.040**	**10.286**	**14.947**	**21.725**	**31.409**	**45.259**	**65.001**	**93.051**	**132.782**	**188.884**	**267.864**	**378.721**	**533.869**

FINAL EXAMINATION

SEMESTER/SESSION: SEM II/2014-2015 PROGRAMME: 2BPA
COURSE NAME: FINANCIAL & INVESTMENT MANAGEMENT COURSE CODE: BPB23403

Future Value of an Annuity Table

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%
1	1.000	1.000	1.000	1.000	**1.000**	1.000	1.000	1.000	1.000	**1.000**	1.000	1.000	1.000	1.000	**1.000**	1.000	1.000
2	2.010	2.020	2.030	2.040	**2.050**	2.060	2.070	2.080	2.090	**2.100**	2.110	2.120	2.130	2.140	**2.150**	2.160	2.170
3	3.030	3.060	3.091	3.122	**3.153**	3.184	3.215	3.246	3.278	**3.310**	3.342	3.374	3.407	3.440	**3.473**	3.506	3.539
4	4.060	4.122	4.184	4.246	**4.310**	4.375	4.440	4.506	4.573	**4.641**	4.710	4.779	4.850	4.921	**4.993**	5.066	5.141
5	5.101	5.204	5.309	5.416	**5.526**	5.637	5.751	5.867	5.985	**6.105**	6.228	6.353	6.480	6.610	**6.742**	6.877	7.014
6	6.152	6.308	6.468	6.633	**6.802**	6.975	7.153	7.336	7.523	**7.716**	7.913	8.115	8.323	8.536	**8.754**	8.977	9.207
7	7.214	7.434	7.662	7.898	**8.142**	8.394	8.654	8.923	9.200	**9.487**	9.783	10.089	10.405	10.730	**11.067**	11.414	11.772
8	8.286	8.583	8.892	9.241	**9.549**	9.897	10.260	10.637	11.028	**11.436**	11.859	12.300	12.757	13.233	**13.727**	14.420	14.773
9	9.369	9.755	10.159	10.583	**11.207**	11.491	11.978	12.488	13.021	**13.579**	14.164	14.776	15.416	16.085	**16.786**	17.519	18.285
10	**10.462**	**10.950**	**11.464**	**12.006**	**12.578**	**13.181**	**13.816**	**14.487**	**15.193**	**15.937**	**16.722**	**17.549**	**18.420**	**19.337**	**20.304**	**21.321**	**22.393**
11	11.567	12.169	12.808	13.486	**14.207**	14.972	15.784	16.645	17.560	**18.531**	19.561	20.655	21.814	23.045	**24.349**	25.733	27.200
12	12.683	13.412	14.192	15.026	**15.917**	16.870	17.888	18.977	20.141	**21.384**	22.713	24.133	25.650	27.271	**29.002**	30.850	32.824
13	13.809	14.680	15.618	16.627	**17.713**	18.882	20.141	21.495	22.953	**24.523**	26.212	28.029	29.985	32.089	**34.352**	36.786	39.404
14	14.947	15.974	17.086	18.292	**19.599**	21.015	22.550	24.215	26.019	**27.975**	30.095	32.393	34.883	37.581	**40.505**	43.672	47.103
15	16.097	17.293	18.599	20.024	**21.579**	23.276	25.129	27.152	29.361	**31.772**	34.405	37.280	40.417	43.842	**47.580**	51.660	56.110
16	17.258	18.639	20.157	21.825	**23.657**	25.673	27.888	30.324	33.003	**35.950**	39.190	42.753	46.672	50.980	**55.717**	60.925	66.649
17	18.430	20.012	21.762	23.698	**25.840**	28.213	30.840	33.750	36.974	**40.545**	44.501	48.884	53.739	59.118	**65.075**	71.673	78.979
18	19.615	21.412	23.414	25.645	**28.132**	30.906	33.999	37.450	41.301	**45.599**	50.396	55.750	61.725	68.394	**75.836**	84.141	93.406
19	20.811	22.841	25.117	27.671	**30.539**	33.760	37.379	41.446	46.018	**51.159**	56.939	63.440	70.749	78.969	**88.212**	98.603	110.285
20	**22.019**	**24.297**	**26.870**	**29.778**	**33.066**	**36.786**	**40.995**	**45.762**	**51.160**	**57.275**	**64.203**	**72.052**	**80.947**	**91.025**	**102.444**	**115.380**	**130.033**
21	23.239	25.783	28.676	31.969	**35.719**	39.993	44.865	50.423	56.765	**64.002**	72.265	81.699	92.470	104.768	**118.810**	134.841	153.139
22	24.472	27.299	30.537	34.248	**38.505**	43.392	49.006	55.457	62.873	**71.403**	81.214	92.503	105.491	120.436	**137.632**	157.415	180.172
23	25.716	28.845	32.453	36.618	**41.430**	46.996	53.436	60.893	69.532	**79.543**	91.148	104.603	120.205	138.297	**159.276**	183.601	211.801
24	26.973	30.422	34.426	39.083	**44.502**	50.816	58.177	66.765	76.790	**88.497**	102.174	118.155	136.831	158.659	**184.168**	213.978	248.808
25	28.243	32.030	36.459	41.646	**47.727**	54.865	63.249	73.106	84.701	**98.347**	114.413	133.334	155.620	181.871	**212.793**	249.214	292.105
26	29.526	33.671	38.553	44.312	**51.113**	59.156	68.676	79.954	93.324	**109.182**	127.999	150.334	176.850	208.333	**245.712**	290.088	342.763
27	30.821	35.344	40.710	47.084	**54.669**	63.706	74.484	87.351	102.723	**121.100**	143.079	169.374	200.841	238.499	**283.569**	337.502	402.032
28	32.129	37.051	42.931	49.968	**58.403**	68.528	80.698	95.339	112.968	**134.210**	159.817	190.699	227.950	272.889	**327.104**	392.503	471.378
29	33.450	38.792	45.219	52.966	**62.323**	73.640	87.347	103.966	124.135	**148.631**	178.397	214.583	258.583	312.094	**377.170**	456.303	552.512
30	**34.785**	**40.568**	**47.575**	**56.085**	**66.439**	**79.058**	**94.461**	**113.283**	**136.308**	**164.494**	**199.021**	**241.333**	**293.199**	**356.787**	**434.745**	**530.312**	**647.439**
31	36.133	42.379	50.003	59.328	**70.761**	84.802	102.073	123.346	149.575	**181.943**	221.913	271.293	332.315	407.737	**500.957**	616.162	758.504
32	37.494	44.227	52.503	62.701	**75.299**	90.890	110.218	134.214	164.037	**201.138**	247.324	304.848	376.516	465.820	**577.100**	715.747	888.449
33	38.869	46.112	55.078	66.210	**80.064**	97.343	118.933	145.951	179.800	**222.252**	275.529	342.429	426.463	532.035	**664.666**	831.267	1040.486
34	40.258	48.034	57.730	69.858	**85.067**	104.184	128.259	158.627	196.982	**245.477**	306.837	384.521	482.903	607.520	**765.365**	965.270	1218.368
35	41.660	49.994	60.462	73.652	**90.320**	111.435	138.237	172.317	215.711	**271.024**	341.590	431.663	546.681	693.573	**881.170**	1120.713	1426.491
36	43.077	51.994	63.276	77.598	**95.836**	119.121	148.913	187.102	236.125	**299.127**	380.164	484.463	618.749	791.673	**1014.346**	1301.027	1669.994
37	44.508	54.034	66.174	81.702	**101.628**	127.268	160.337	203.070	258.376	**330.039**	422.982	543.599	700.187	903.507	**1167.498**	1510.191	1954.894
38	45.953	56.115	69.159	85.970	**107.710**	135.904	172.561	220.316	282.630	**364.043**	470.511	609.831	792.211	1030.998	**1343.622**	1752.822	2288.225
39	47.412	58.237	72.234	90.409	**114.095**	145.058	185.640	238.941	309.066	**401.448**	523.267	684.010	896.198	1176.338	**1546.165**	2034.273	2678.224
40	**48.886**	**60.402**	**75.401**	**95.026**	**120.800**	**154.762**	**199.635**	**259.057**	**337.882**	**442.593**	**581.826**	**767.091**	**1013.704**	**1342.025**	**1779.090**	**2360.757**	**3134.522**