

**CONFIDENTIAL**



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2014/2015**

**COURSE NAME** : FINANCIAL AND INVESTMENT  
MANAGEMENT

**COURSE CODE** : BPB 23403

**PROGRAMME** : 3 BPA

**EXAMINATION DATE** : DECEMBER 2014/JANUARY 2015

**DURATION** : 2 HOURS 30 MINUTES

**INSTRUCTION** : ANSWER ALL QUESTIONS

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

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- Q1** (a) Differentiate between systematic risk and unsystematic risk with an appropriate example. (5 marks)
- (b) You own a portfolio consisting of the following stocks as shown in the following **Table Q1**.

**Table Q1:** Portfolio's Information

Stock	Percentage of Portfolio (%)	Beta	Expected Return (%)
1	10	1.00	12
2	25	0.75	11
3	15	1.30	15
4	30	0.60	9
5	20	1.20	14

In addition, the risk-free rate is 8 percent while the expected return on the market portfolio is 11.6 percent.

- (i) Calculate the expected return of your portfolio. (4 marks)
- (ii) Calculate the portfolio beta. (4 marks)
- (iii) Given the information above, plot the security market line on paper. Plot the stocks from your portfolio on your graph. (5 marks)
- (iv) Determine which stocks appear to be your winners and which ones appear to be losers. (2 marks)

**Q2** DigiMax Berhad is considering a major expansion of its product line and has estimated the following cash flows associated with such an expansion. The initial outlay associated with the expansion would be RM2,250,000 and the project would generate incremental after-tax cash flows of RM755,000 per year for 5 years. The appropriate required rate of return is 11.5%.

- (a) Determine the project's payback period. (3 marks)
- (b) Calculate the project's net present value. (6 marks)
- (c) Calculate the project's profitability index. (3 marks)
- (d) Calculate the project's internal rate of return. (7 marks)
- (e) Determine whether this project should be accepted or rejected. (1 marks)

**Q3** (a) Compute the cost for the following sources of financing:

- (i) A new common stock issue that paid a RM1.25 dividend last year. The par value of the stock is RM2, and the earnings per share have grown at a rate of 6% per year. This growth rate is expected to continue into the foreseeable future. The company also maintains a constant dividend/earnings ratio of 40%. The price of this stock is now RM30, but 9% flotation costs are anticipated. (4 marks)
- (ii) A bond that has a RM1,000 par value (face value) and a coupon interest rate of 13%. A new issue would net the company 90% of the RM1,125 market value. The bonds mature in 20 years, and the firm's average tax rate is 30% and its marginal tax rate is 34%. (4 marks)
- (iii) A preferred stock paying a 7% dividend on a RM125 par value. If a new issue is offered, the company can expect to net RM90 per share. (4 marks)

- (iv) Internal common equity where the current market price of the common stock is RM38. The expected dividend this coming year should be RM4, increasing thereafter at a 5% annual growth rate. This corporation's tax rate is 34%.

(4 marks)

- (b) The capital structure for the DigiCom Corporation is provided in **Table Q3(b)**. The company plans to maintain its debt structure in the future. The firm has a 7% after-tax cost of debt, a 12.5% cost of preferred stock, and a 15% cost of common stock.

**Table Q3(b): Bias Corporation's Capital Structure**

Capital Structure	(RM'000)
Bonds	RM1,400
Preferred stock	550
Common stock	3,600

Calculate the firm's weighted average cost of capital (WACC).

(4 marks)

- Q4** (a) Define Hedging Principle.

(2 marks)

- (b) List **TWO (2)** advantages and disadvantages of current liabilities.

(4 marks)

- (c) You are considering a loan of RM45,000 to finance inventories for a janitorial supply store that you plan to open. The bank offers to lend you the money at 12% annual interest for the six months the funds will be needed.

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

(4 marks)

- (ii) In addition, the bank requires you to maintain a 12% compensating balance in the bank. Because you are just opening your business, you do not have a demand deposit at the bank that can be used to meet the compensating balance requirement. This means that you will have to put 12% of the loan amount from your own personal money (which you had planned to use to help finance the business) in a checking account.

Calculate the cost of the loan.

(6 marks)

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

Calculate the effective rate of interest on the loan.

(4 marks)

**Q5** (a) Define the following terms:

(i) Asked rate

(2 marks)

(ii) Bid rate

(2 marks)

(iii) Spread

(2 marks)

(b) Describe **THREE (3)** levels of Foreign Exchange (FOREX) market.

(6 marks)

(c) The following **Table Q5(c)** contains information of the quoted foreign exchange on 28 December 2013.

**Table Q5(c):** Selected Foreign Exchange Rate on 28 December 2013

Country	Direct rate	Indirect rate
Britain (Pound)	1.6228	0.6162
China (Yuan)	0.1555	6.4311
Euro	1.4241	0.7022
Japan (Yen)	0.0130	77.1550

Determine the cross rates for the following:

(i) Britain (Pound) to Japanese (Yen).

(4 marks)

(ii) Euro to Chinese (Yuan).

(4 marks)

**- END OF QUESTION -**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\text{After-tax cost of debt} = k_d (1 - T)$$

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

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

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

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

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

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

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

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

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

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

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	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%
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
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
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
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
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
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
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
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
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	0.225	0.209
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	0.191	0.176
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
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
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
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	0.099	0.088
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
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
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
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
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
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
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	0.031	0.026
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	0.026	0.022
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	0.022	0.018
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	0.019	0.015
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	0.016	0.013
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	0.014	0.011
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	0.011	0.009
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	0.010	0.008
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	0.008	0.006
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
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	0.006	0.005
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	0.005	0.004
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	0.004	0.003
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	0.004	0.003
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
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	0.003	0.002
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	0.002	0.002
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	0.002	0.001
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	0.001	0.001
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	0.001	0.001

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**Future Value Table**

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%
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	1.180	1.190
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	1.392	1.416
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	1.643	1.685
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	1.687	1.749	1.811	1.874	1.939	2.005
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	2.288	2.386
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	2.700	2.840
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	3.185	3.379
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	3.759	4.021
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	4.435	4.785
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	5.234	5.695
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	6.176	6.777
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	7.288	8.064
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	8.599	9.596
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	10.147	11.420
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	11.974	13.590
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	14.129	16.172
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	16.672	19.244
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	19.673	22.901
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	23.214	27.252
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	27.393	32.429
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	32.324	38.591
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	38.142	45.923
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	45.008	54.649
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	53.109	65.032
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	62.669	77.388
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	73.949	92.092
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	87.260	109.589
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	102.967	130.411
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	121.501	155.189
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	143.371	184.675
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	169.177	219.764
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	199.629	261.519
33	1.389	1.922	2.652	3.648	5.003	6.841	9.325	12.676	17.182	23.548	31.308	42.092	56.440	76.053	100.700	134.003	177.883	235.563	311.207
34	1.403	1.961	2.732	3.794	5.253	7.251	9.978	13.690	18.718	25.828	34.752	47.143	63.777	86.053	115.805	155.443	208.123	277.964	370.337
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	327.997	440.701
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	387.037	524.434
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	456.703	624.076
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	538.910	742.651
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	635.914	883.754
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	750.378	1051.668



## FINAL EXAMINATION

SEMESTER/SESSION: SEM I/2104/2015

PROGRAMME: 3 BPA

COURSE NAME : FINANCIAL &amp; INVESTMENT MANAGEMENT

COURSE CODE: BPB23403

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%
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	0.847	0.840
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	1.566	1.547
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
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
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
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
7	6.728	6.472	6.230	6.002	5.796	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
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
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
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	4.494	4.339
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	4.656	4.486
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
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	4.910	4.715
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	5.008	4.802
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
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	5.162	4.938
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	5.222	4.990
18	16.396	14.992	13.754	12.659	11.690	10.838	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
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	5.316	5.070
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	5.363	5.101
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	5.384	5.127
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	5.410	5.149
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	5.432	5.167
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	5.451	5.182
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
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	5.480	5.206
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	5.492	5.215
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	5.502	5.223
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	5.510	5.229
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	5.517	5.236
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	5.523	5.239
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	5.528	5.243
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	5.532	5.246
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	5.536	5.249
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	5.539	5.251
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	5.541	5.253
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	5.543	5.255
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	5.545	5.256
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	5.547	5.257
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	5.548	5.258

## FINAL EXAMINATION

SEMESTER/SESSION: SEM I/2104/2015

PROGRAMME: 3 BPA

COURSE NAME : FINANCIAL &amp; 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%	18%	19%
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	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	2.180	2.190
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	3.572	3.606
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	5.215	5.291
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	7.154	7.297
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	9.442	9.683
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	12.142	12.523
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	14.240	14.773	15.327	15.902
9	9.369	9.755	10.159	10.583	11.027	11.491	11.978	12.488	13.021	13.579	14.164	14.776	15.416	16.085	16.786	17.519	18.285	19.086	19.923
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	23.521	24.709
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	28.755	30.404
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	34.931	37.180
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	42.219	45.244
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	50.818	54.841
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	60.965	66.261
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	72.939	79.850
17	18.430	20.012	21.762	23.698	25.840	28.213	30.840	33.750	36.974	40.501	44.501	48.884	53.739	59.118	65.075	71.673	78.979	87.068	96.022
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	103.740	115.266
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	123.414	138.166
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	146.628	165.418
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	174.021	197.847
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	206.345	236.438
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	244.487	282.362
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	289.494	337.010
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	342.063	402.042
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	405.272	479.431
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	479.221	571.522
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	566.481	681.112
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	669.447	811.523
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	790.948	966.712
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	934.319	1151.387
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	1103.496	1371.115
33	38.869	46.112	55.078	66.210	80.064	97.343	118.233	145.951	179.800	222.252	275.529	342.429	426.463	532.035	664.666	831.267	1040.486	1303.125	1652.670
34	40.258	48.034	57.730	69.858	85.067	104.184	128.959	158.627	196.982	245.477	306.837	384.521	482.901	607.520	765.365	965.270	1218.368	1538.688	1943.877
35	41.660	49.994	60.462	73.652	90.320	111.435	138.237	172.317	217.024	271.024	341.590	431.663	546.681	693.573	881.170	1120.713	1426.491	1816.652	2314.214
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	2144.649	2754.914
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	2531.686	3279.348
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	2988.389	3903.424
39	47.412	58.234	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	3527.299	4646.075
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	4163.213	5529.829