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**UTHM**  
Universiti Tun Hussein Onn Malaysia

**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

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

COURSE NAME	:	PRINCIPLES OF FINANCE FOR REAL ESTATE MANAGEMENT
COURSE CODE	:	BPE22802
PROGRAMME	:	2 BPD
EXAMINATION DATE	:	DECEMBER 2014/JANUARY 2015
DURATION	:	2 HOURS
INSTRUCTION	:	ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF **SIX (6)** PAGES

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- Q1** (a) (i) Calculate NPV for each project as in Table **Q1** by using 14% cost of capital based on **Appendix A** and **Appendix B**. (15 marks)
- (ii) Determine whether the project is acceptable. (5 marks)

**TABLE Q1** : Cash Flow for Potential Projects

	Project A	Project B	Project C	Project D	Project E
Initial Investment ( $CF_0$ )	RM26,000	RM500,000	RM170,000	RM950,000	RM80,000
Year ( $t$ )	Cash inflows ( $CF_t$ )				
1	RM4,000	RM100,000	RM20,000	RM230,000	0
2	4,000	120,000	19,000	230,000	0
3	4,000	140,000	18,000	230,000	0
4	4,000	160,000	17,000	230,000	20,000
5	4,000	180,000	16,000	230,000	30,000
6	4,000	200,000	15,000	230,000	0
7	4,000		14,000	230,000	50,000
8	4,000		13,000	230,000	60,000
9	4,000		12,000		70,000
10	4,000		11,000		

- (b) Explain your choice if the projects are mutually exclusive. (5 marks)

- Q2** Frito International is attempting to evaluate the feasibility of investing RM95,000 in a piece of equipment that has a 5-year life. The firm has estimated the cash inflows associated with the proposal as shown in Table **Q2** below. The firm has a 12% cost of capital. Based on **Appendix A** and **Appendix B**, answer the following questions.

**TABLE Q2** : Cash inflows for new proposed equipment

Year ( $t$ )	Cash inflows ( $CF_t$ )
1	RM20,000
2	25,000
3	30,000
4	35,000
5	40,000

- (a) Calculate the payback period for the proposed investment. (3 marks)

- (b) Calculate the profitability index (PI) for the proposed investment. (3 marks)
- (c) Calculate the net present value (NPV) for the proposed investment. (4 marks)
- (d) Calculate the estimated internal rate of return (IRR) for the proposed investment. (10 marks)
- (e) Explain your recommendation using NPV and IRR. (5 marks)

**Q3** Ace's Business Forms has compiled several factors relative to its financing mix. The firm pays 8 percent on its current assets and 10 percent on its fixed assets. The firm's monthly current, fixed and total asset requirements for the previous year are summarized in Table 3 below.

**TABLE Q3 : Business asset requirements**

Ace Business Forms			
Month	Current Assets	Fixed Assets	Total Assets
January	\$125,000	\$250,000	\$375,000
February	130,000	250,000	380,000
March	135,000	250,000	385,000
April	150,000	250,000	400,000
May	150,000	250,000	400,000
June	125,000	250,000	375,000
July	115,000	250,000	365,000
August	120,000	250,000	370,000
September	115,000	250,000	370,000
October	100,000	250,000	350,000
November	110,000	250,000	360,000
December	115,000	250,000	365,000

- (a) Determine the average monthly seasonal and permanent funds requirement. (14 marks)
- (b) Calculate the total cost of financing for conservative and aggressive strategy. (6 marks)

- (c) Calculate the net working capital under the aggressive and conservative strategy.

(5 marks)

- Q4** Adam's Aeronautics is interested in making sure it has enough money to finance its assets. The company's current assets and fixed assets for the months of January through December are given in Table Q4.

**TABLE Q4 : Business asset requirements**

Month	Current Assets	Fixed Assets	Total Assets
January	\$60,000	\$70,000	\$130,000
February	58,000	70,000	128,000
March	55,000	70,000	125,000
April	47,000	70,000	117,000
May	40,000	70,000	110,000
June	41,000	70,000	111,000
July	40,000	70,000	110,000
August	37,000	70,000	107,000
September	38,000	70,000	108,000
October	33,000	70,000	103,000
November	40,000	70,000	110,000
December	50,000	70,000	120,000

- (a) Calculate the average monthly seasonal and permanent funds requirement.

(14 marks)

- (b) Determine the total cost of financing under the aggressive and conservative strategies assuming short-term fund costs 4.5% and the interest rate for long-term funds is 12%.

(6 marks)

- (c) Calculate the net working capital under the aggressive and conservative strategy.

(5 marks)

**- END OF QUESTION -**

APPENDIX A

FINAL EXAMINATION

SEMESTER/SESSION: SEM I/2013/2014

PROGRAMME : 2 BPD

COURSE NAME : PRINCIPLES OF FINANCE

COURSE CODE: BPE22802

n	1%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%	12.0%	14.0%
1	0.9901	0.9852	0.9804	0.9756	0.9709	0.9662	0.9615	0.9569	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772
2	0.9803	0.9707	0.9618	0.9526	0.9432	0.9335	0.9246	0.9157	0.9070	0.8934	0.8794	0.8653	0.8517	0.8386	0.8264	0.8150
3	0.9706	0.9563	0.9423	0.9286	0.9151	0.9019	0.8890	0.8763	0.8638	0.8496	0.8348	0.8205	0.8067	0.7933	0.7811	0.7700
4	0.9610	0.9422	0.9238	0.9060	0.8886	0.8714	0.8548	0.8386	0.8227	0.8059	0.7892	0.7729	0.7571	0.7418	0.7269	0.7124
5	0.9515	0.9283	0.9057	0.8839	0.8626	0.8420	0.8219	0.8025	0.7835	0.7647	0.7463	0.7284	0.7110	0.6941	0.6776	0.6615
6	0.9420	0.9145	0.8880	0.8623	0.8375	0.8135	0.7903	0.7679	0.7462	0.7250	0.7043	0.6841	0.6644	0.6451	0.6262	0.6077
7	0.9327	0.9010	0.8706	0.8413	0.8131	0.7860	0.7599	0.7348	0.7107	0.6874	0.6647	0.6425	0.6208	0.5995	0.5786	0.5581
8	0.9235	0.8877	0.8535	0.8207	0.7894	0.7594	0.7307	0.7032	0.6768	0.6514	0.6261	0.6011	0.5764	0.5521	0.5281	0.5044
9	0.9143	0.8746	0.8368	0.8007	0.7664	0.7337	0.7026	0.6729	0.6446	0.6171	0.5904	0.5644	0.5389	0.5138	0.4890	0.4645
10	0.9053	0.8617	0.8203	0.7812	0.7441	0.7089	0.6756	0.6439	0.6139	0.5854	0.5584	0.5320	0.5063	0.4811	0.4562	0.4316
11	0.8963	0.8489	0.8043	0.7621	0.7224	0.6849	0.6496	0.6162	0.5847	0.5541	0.5244	0.4955	0.4674	0.4399	0.4128	0.3861
12	0.8874	0.8364	0.7885	0.7436	0.7014	0.6618	0.6246	0.5897	0.5568	0.5250	0.4941	0.4641	0.4348	0.4061	0.3778	0.3500
13	0.8787	0.8240	0.7730	0.7254	0.6810	0.6394	0.6006	0.5643	0.5303	0.4981	0.4674	0.4373	0.4077	0.3784	0.3495	0.3211
14	0.8700	0.8118	0.7579	0.7077	0.6611	0.6178	0.5775	0.5400	0.5051	0.4723	0.4413	0.4108	0.3807	0.3509	0.3214	0.2923
15	0.8613	0.7999	0.7430	0.6905	0.6419	0.5969	0.5553	0.5167	0.4810	0.4473	0.4153	0.3846	0.3542	0.3240	0.2940	0.2643
16	0.8528	0.7880	0.7284	0.6736	0.6232	0.5767	0.5339	0.4945	0.4581	0.4242	0.3921	0.3611	0.3303	0.3000	0.2700	0.2403
17	0.8444	0.7764	0.7142	0.6572	0.6050	0.5572	0.5134	0.4732	0.4363	0.3714	0.3387	0.3077	0.2770	0.2466	0.2164	0.1865
18	0.8360	0.7649	0.7002	0.6412	0.5874	0.5384	0.4936	0.4528	0.4155	0.3503	0.3176	0.2865	0.2557	0.2252	0.1949	0.1648
19	0.8277	0.7536	0.6864	0.6255	0.5703	0.5202	0.4746	0.4333	0.3957	0.3305	0.2976	0.2663	0.2353	0.2045	0.1739	0.1434
20	0.8195	0.7425	0.6730	0.6103	0.5537	0.5026	0.4564	0.4146	0.3769	0.3118	0.2784	0.2471	0.2160	0.1850	0.1541	0.1233
21	0.8114	0.7315	0.6598	0.5954	0.5375	0.4856	0.4388	0.3968	0.3589	0.2942	0.2604	0.2291	0.1979	0.1668	0.1358	0.1049
22	0.8034	0.7207	0.6468	0.5809	0.5219	0.4692	0.4220	0.3797	0.3418	0.2775	0.2432	0.2119	0.1806	0.1494	0.1182	0.0871
23	0.7954	0.7100	0.6342	0.5667	0.5067	0.4533	0.4057	0.3634	0.3256	0.2618	0.2270	0.1957	0.1644	0.1331	0.1018	0.0705
24	0.7876	0.6995	0.6217	0.5529	0.4919	0.4380	0.3901	0.3477	0.3101	0.2470	0.2118	0.1799	0.1480	0.1161	0.0842	0.0523
25	0.7798	0.6892	0.6095	0.5394	0.4776	0.4231	0.3751	0.3327	0.2953	0.2330	0.1974	0.1654	0.1335	0.1015	0.0695	0.0375
26	0.7720	0.6790	0.5976	0.5262	0.4637	0.4088	0.3607	0.3184	0.2812	0.2198	0.1838	0.1517	0.1197	0.0876	0.0555	0.0234
27	0.7644	0.6690	0.5859	0.5134	0.4502	0.3950	0.3468	0.3047	0.2678	0.2074	0.1711	0.1389	0.1068	0.0746	0.0424	0.0102
28	0.7568	0.6591	0.5744	0.5009	0.4371	0.3817	0.3335	0.2916	0.2551	0.1956	0.1591	0.1264	0.0937	0.0610	0.0282	0.0054
29	0.7493	0.6494	0.5631	0.4887	0.4243	0.3687	0.3207	0.2790	0.2429	0.1846	0.1480	0.1153	0.0826	0.0498	0.0170	0.0042
30	0.7419	0.6398	0.5521	0.4767	0.4120	0.3563	0.3083	0.2670	0.2314	0.1741	0.1374	0.1047	0.0720	0.0392	0.0064	0.0036
31	0.7346	0.6303	0.5412	0.4651	0.4000	0.3442	0.2965	0.2555	0.2204	0.1643	0.1276	0.0949	0.0622	0.0294	0.0066	0.0038
32	0.7273	0.6210	0.5306	0.4538	0.3883	0.3326	0.2851	0.2445	0.2099	0.1550	0.1182	0.0855	0.0528	0.0200	0.0072	0.0044
33	0.7201	0.6118	0.5202	0.4427	0.3770	0.3213	0.2741	0.2340	0.1999	0.1462	0.1094	0.0767	0.0440	0.0112	0.0084	0.0056
34	0.7130	0.6028	0.5100	0.4319	0.3660	0.3105	0.2636	0.2239	0.1904	0.1379	0.1011	0.0684	0.0357	0.0029	0.0101	0.0073
35	0.7059	0.5939	0.5000	0.4214	0.3554	0.3000	0.2534	0.2143	0.1813	0.1301	0.0937	0.0610	0.0282	0.0054	0.0126	0.0098
36	0.6989	0.5851	0.4902	0.4111	0.3450	0.2898	0.2437	0.2050	0.1727	0.1227	0.0875	0.0550	0.0222	0.0094	0.0166	0.0138
37	0.6920	0.5764	0.4806	0.4011	0.3350	0.2800	0.2343	0.1962	0.1644	0.1158	0.0815	0.0490	0.0162	0.0034	0.0106	0.0078
38	0.6852	0.5679	0.4712	0.3913	0.3252	0.2706	0.2253	0.1878	0.1566	0.1092	0.0759	0.0434	0.0106	0.0078	0.0150	0.0122
39	0.6784	0.5595	0.4619	0.3817	0.3158	0.2614	0.2166	0.1797	0.1491	0.1031	0.0704	0.0376	0.0048	0.0120	0.0092	0.0064
40	0.6717	0.5513	0.4529	0.3724	0.3066	0.2526	0.2083	0.1719	0.1420	0.0972	0.0668	0.0340	0.0012	0.0084	0.0056	0.0028

APPENDIX B

FINAL EXAMINATION

SEMESTER/SESSION: SEM I/2013/2014  
 COURSE NAME : PRINCIPLES OF FINANCE

PROGRAMME : 2 BPD  
 COURSE CODE: BPE22802

n	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%	12.0%	14.0%
1	0.9901	0.9852	0.9804	0.9756	0.9709	0.9662	0.9615	0.9569	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772
2	1.9704	1.9559	1.9416	1.9274	1.9135	1.8997	1.8861	1.8727	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467
3	2.9410	2.9122	2.8839	2.8560	2.8286	2.8016	2.7751	2.7490	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216
4	3.9020	3.8544	3.8077	3.7620	3.7171	3.6731	3.6299	3.5875	3.5458	3.4512	3.3872	3.3211	3.2397	3.1699	3.0373	2.9137
5	4.8534	4.7826	4.7135	4.6458	4.5797	4.5151	4.4518	4.3900	4.3295	4.2124	4.1002	3.9827	3.8897	3.7908	3.6048	3.4331
6	5.7955	5.6972	5.6014	5.5081	5.4172	5.3286	5.2421	5.1579	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887
7	6.7282	6.5982	6.4720	6.3494	6.2303	6.1145	6.0021	5.8927	5.7864	5.5624	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883
8	7.6517	7.4859	7.3255	7.1701	7.0197	6.8740	6.7327	6.5959	6.4632	6.2098	5.9743	5.7466	5.5348	5.3349	4.9676	4.6389
9	8.5660	8.3605	8.1622	7.9709	7.7861	7.6077	7.4353	7.2688	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464
10	9.4713	9.2222	8.9826	8.7521	8.5302	8.3166	8.1109	7.9127	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161
11	10.3676	10.0711	9.7868	9.5142	9.2526	9.0016	8.7605	8.5289	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527
12	11.2551	10.9075	10.5763	10.2578	9.9540	9.6633	9.3851	9.1186	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603
13	12.1337	11.7315	11.3484	10.9832	10.6350	10.3027	9.9856	9.6829	9.3936	8.8527	8.3572	7.9038	7.4869	7.1034	6.4235	5.8424
14	13.0037	12.5434	12.1062	11.6909	11.2961	10.9205	10.5631	10.2228	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021
15	13.8651	13.3432	12.8493	12.3814	11.9379	11.5174	11.1184	10.7395	10.3797	9.7122	9.1079	8.5995	8.0607	7.6061	6.8109	6.1422
16	14.7179	14.1313	13.5777	13.0550	12.5611	12.0941	11.6523	11.2340	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651
17	15.5623	14.9076	14.2919	13.7122	13.1661	12.6513	12.1657	11.7072	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729
18	16.3983	15.6726	14.9920	14.3534	13.7535	13.1997	12.6893	12.2160	11.7896	10.8276	10.0591	9.3719	8.7566	8.2014	7.2497	6.4674
19	17.2260	16.4262	15.6785	14.9789	14.3238	13.7098	13.1339	12.5933	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504
20	18.0456	17.1686	16.3514	15.5892	14.8775	14.2124	13.5903	13.0079	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231
21	18.8570	17.9001	17.0112	16.1845	15.4150	14.6980	14.0292	13.4047	12.8212	11.7641	10.8355	10.0168	9.2922	8.6487	7.5620	6.6870
22	19.6604	18.6208	17.6580	16.7654	15.9369	15.1671	14.4511	13.7844	13.1630	12.0416	11.0612	10.2007	9.4424	8.7715	7.6446	6.7429
23	20.4558	19.3309	18.2922	17.3321	16.4436	15.6204	14.8568	14.1478	13.4886	12.3034	11.2722	10.3711	9.6802	8.9832	7.7184	6.7921
24	21.2434	20.0304	18.9139	17.8850	16.9355	16.0584	15.2470	14.4955	13.7966	12.5504	11.4693	10.5288	9.7066	8.9447	7.7843	6.8351
25	22.0232	20.7196	19.5235	18.4244	17.4131	16.4815	15.6221	14.8282	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729
26	22.7952	21.3986	20.1210	18.9506	17.8768	16.8904	15.9828	15.1466	14.3752	13.0032	11.8258	10.8100	9.9290	9.1609	7.8957	6.9061
27	23.5596	22.0676	20.7069	19.4640	18.3270	17.2854	16.3296	15.4513	14.6430	13.2105	11.9867	10.9352	10.0266	9.2372	7.9426	6.9352
28	24.3164	22.7267	21.2913	19.9649	18.7641	17.6670	16.6631	15.7429	14.8981	13.4062	12.1371	11.0511	10.1161	9.3066	7.9844	6.9607
29	25.0658	23.3761	21.8444	20.4535	19.1885	18.0358	16.9837	16.0219	15.1411	13.5907	12.2777	11.1584	10.1983	9.3696	8.0218	6.9830
30	25.8077	24.0158	22.3965	20.9303	19.6004	18.3920	17.2920	16.2889	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0562	7.0027
31	26.5423	24.6461	22.9377	21.3954	20.0004	18.7363	17.5885	16.5444	15.5928	13.9291	12.5318	11.3498	10.3428	9.4790	8.0850	7.0199
32	27.2696	25.2671	23.4683	21.8492	20.3888	19.0689	17.8736	16.7889	15.8027	14.0840	12.6466	11.4350	10.4062	9.5264	8.1116	7.0350
33	27.9897	25.8790	23.9886	22.2919	20.7658	19.3902	18.1476	17.0229	16.0025	14.2302	12.7538	11.5139	10.4644	9.5694	8.1354	7.0482
34	28.7027	26.4817	24.4986	22.7238	21.1318	19.7007	18.4112	17.2468	16.1929	14.3681	12.8540	11.5869	10.5178	9.6086	8.1566	7.0599
35	29.4086	27.0756	24.9986	23.1452	21.4872	20.0007	18.6646	17.4610	16.3742	14.4982	12.9477	11.6546	10.5668	9.6442	8.1755	7.0700
36	30.1075	27.6607	25.4888	23.5563	21.8323	20.2905	18.9083	17.6660	16.5469	14.6210	13.0352	11.7172	10.6118	9.6765	8.1924	7.0790
37	30.7995	28.2371	25.9695	23.9573	22.1672	20.5705	19.1426	17.8622	16.7113	14.7368	13.1170	11.7752	10.6530	9.7059	8.2075	7.0868
38	31.4847	28.8051	26.4406	24.3486	22.4925	20.8411	19.3679	18.0500	16.8679	14.8460	13.1935	11.8289	10.6908	9.7327	8.2210	7.0937
39	32.1630	29.3646	26.9026	24.7303	22.8082	21.1025	19.5845	18.2297	17.0170	14.9491	13.2649	11.8786	10.7255	9.7570	8.2330	7.0997
40	32.8347	29.9158	27.3555	25.1028	23.1148	21.3551	19.7928	18.4016	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050