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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2013/2014**

COURSE NAME : PROJECT FINANCIAL  
MANAGEMENT  
COURSE CODE : BFP 40503  
PROGRAMME : 4 BFF  
EXAMINATION DATE : JUNE 2014  
DURATION : 3 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

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

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**Q1 (a)** Identify two (2) categories of direct costs associated with a major construction project.

(4 marks)

(b) Project management is a financing of a particular economic unit in which a lender is satisfied to look initially to the cash flows and earnings of that economic unit as the source of funds from which a loan will be repaid. List and discuss five (5) sources of capital.

(10 marks)

(c) One of the features that relate with financing is no project can take place without funding. Explain two (2) main types of finance.

(6 marks)

(d) Demonstrate a project with;

(i) non-recourse financing

(ii) limited-recourse financed project involving a mixture of financing

(5 marks)

**Q2** Suppose that a savings account is compounded continuously with a principal of \$1,500. After 20 years, the amount increased to \$5,000.

(a) Calculate the per annum interest rate, assuming that nothing was added or withdrawn during that period.

(3 marks)

(b) If the account sits for another 20 years, calculate the amount in the account.

(2 marks)

(b) A project requires an initial investment of \$225,000 and is expected to generate the following net cash inflows:

Year	1	2	3	4
Cash inflow	\$95,000	\$80,000	\$60,000	\$55,000

Compute net present value of the project if the minimum desired rate of return is 12% and evaluate the result.

(12 marks)

- (c) Compare and choose the most desirable investment proposal from the following alternatives using profitability index method:

	<u>Proposal</u> <u>X</u>	<u>Proposal</u> <u>Y</u>	<u>Proposal</u> <u>Z</u>
Present value of net cash flow	\$212,000	\$171,800	\$185,200
Amount required to invest	200,000	160,000	180,000
Net present value	12,000	11,800	5,200

(8 marks)

**Q3** The following questions are related to Financial Risk Management:

- (a) In construction, machinery is utmost important resource. It can be bought, rented, or leased, and have several models and brands. However, there are several financial risk that associated with the decision on procuring those machine. Relate briefly on old perception and new perception regarding the particular financial risk.

(5 marks)

- (b) Construction project involves a lot of financial risks which need to be managed. Based on the following financial risk contributors, construct a relevant HIRARC table complete with their Risk Assessment Level, and discussion on those levels along with the possible countermeasures.

- (i) Capital expenditure on construction
- (ii) Material
- (iii) Machine
- (iv) Manpower

(20 marks)

**Q4** The following questions are related to Life Cycle Cost:

- (a) Briefly explain about Life Cycle Cost and Life Cycle Costing.

(4 marks)

- (b) You are the Process Engineer at a precast plant in Batu Pahat. Recently, the plant is facing many problems because of their service life. Your job is to replace the old plant with a new one. However from the quotations that you had received, there are three shortlisted companies with different models of plant that comply with your requirements. Table **Q4 (a)** shows the summary of all plants.

Disregarding depreciation and other accounting details, calculate which model of plant should you select for the lowest long term cost of ownership, and state the savings.

(16 marks)

- (c) From answer **Q4 (b)**, calculate how much is required to be invested in the bank today for a replacement of plant which is anticipated to fail in year three. Calculation should be based only on the cost of your selected plant with two different situations on Table **Q4 (b)**. Then, briefly summarize your findings.

(5 marks)

**- END OF QUESTION -**

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### TABLE Q2

Table Q2 Present value of RM1

Years Hence	1%	2%	4%	6%	8%	10%	12%	14%	15%	16%	18%	20%	22%	24%	25%	26%	28%	30%	35%	40%	45%	50%
1 ...	0.990	0.980	0.962	0.943	0.926	0.909	0.895	0.877	0.870	0.862	0.847	0.833	0.820	0.806	0.800	0.794	0.781	0.769	0.741	0.714	0.690	0.667
2 ...	0.980	0.961	0.925	0.890	0.857	0.826	0.797	0.769	0.756	0.743	0.718	0.694	0.672	0.650	0.640	0.630	0.610	0.592	0.549	0.510	0.476	0.444
3 ...	0.971	0.942	0.889	0.840	0.794	0.751	0.712	0.675	0.658	0.641	0.609	0.579	0.551	0.524	0.512	0.500	0.477	0.455	0.406	0.364	0.328	0.296
4 ...	0.961	0.924	0.855	0.792	0.735	0.683	0.636	0.592	0.572	0.552	0.516	0.482	0.451	0.423	0.410	0.397	0.373	0.350	0.301	0.260	0.226	0.198
5 ...	0.951	0.906	0.822	0.747	0.681	0.621	0.567	0.519	0.497	0.476	0.437	0.402	0.370	0.341	0.328	0.315	0.291	0.269	0.223	0.186	0.156	0.132
6 ...	0.942	0.888	0.790	0.705	0.630	0.564	0.507	0.456	0.432	0.410	0.370	0.335	0.303	0.275	0.262	0.250	0.227	0.207	0.165	0.133	0.108	0.088
7 ...	0.933	0.871	0.760	0.665	0.583	0.513	0.452	0.400	0.376	0.354	0.314	0.279	0.249	0.222	0.210	0.198	0.178	0.159	0.122	0.095	0.074	0.059
8 ...	0.923	0.853	0.731	0.627	0.540	0.467	0.404	0.351	0.327	0.305	0.266	0.233	0.204	0.179	0.168	0.157	0.139	0.123	0.091	0.068	0.051	0.039
9 ...	0.914	0.837	0.703	0.592	0.500	0.424	0.361	0.308	0.284	0.263	0.225	0.194	0.167	0.144	0.134	0.125	0.108	0.094	0.067	0.048	0.035	0.026
10 ...	0.905	0.820	0.676	0.558	0.463	0.386	0.322	0.270	0.247	0.227	0.191	0.162	0.137	0.116	0.107	0.099	0.085	0.073	0.050	0.035	0.024	0.017
11 ...	0.896	0.804	0.650	0.527	0.429	0.350	0.287	0.237	0.215	0.195	0.162	0.135	0.112	0.094	0.086	0.079	0.066	0.056	0.037	0.025	0.017	0.012
12 ...	0.887	0.788	0.625	0.497	0.397	0.319	0.257	0.208	0.187	0.168	0.137	0.112	0.092	0.076	0.069	0.062	0.052	0.043	0.027	0.018	0.012	0.008
13 ...	0.879	0.773	0.601	0.469	0.368	0.290	0.229	0.182	0.163	0.145	0.116	0.093	0.075	0.061	0.055	0.050	0.040	0.033	0.020	0.013	0.008	0.005
14 ...	0.870	0.758	0.577	0.442	0.340	0.263	0.205	0.160	0.141	0.125	0.099	0.078	0.062	0.049	0.044	0.039	0.032	0.025	0.015	0.009	0.006	0.003
15 ...	0.861	0.743	0.555	0.437	0.345	0.239	0.183	0.140	0.123	0.108	0.084	0.065	0.051	0.040	0.035	0.031	0.025	0.020	0.011	0.005	0.004	0.002
16 ...	0.853	0.728	0.534	0.394	0.292	0.218	0.163	0.123	0.107	0.093	0.071	0.054	0.042	0.032	0.028	0.025	0.019	0.015	0.008	0.005	0.003	0.002
17 ...	0.844	0.714	0.523	0.371	0.270	0.198	0.146	0.108	0.093	0.080	0.060	0.045	0.034	0.026	0.023	0.020	0.015	0.012	0.006	0.003	0.002	0.001
18 ...	0.836	0.700	0.494	0.350	0.250	0.180	0.130	0.095	0.081	0.069	0.051	0.038	0.028	0.021	0.018	0.016	0.012	0.009	0.005	0.002	0.001	0.001
19 ...	0.828	0.686	0.475	0.331	0.232	0.164	0.116	0.083	0.070	0.060	0.043	0.031	0.023	0.017	0.014	0.012	0.009	0.007	0.003	0.002	0.001	0.001
20 ...	0.820	0.673	0.456	0.312	0.215	0.149	0.104	0.073	0.061	0.051	0.037	0.026	0.019	0.014	0.012	0.010	0.007	0.005	0.002	0.001	0.001	0.001
21 ...	0.811	0.660	0.439	0.294	0.199	0.135	0.095	0.064	0.053	0.044	0.031	0.022	0.015	0.011	0.009	0.008	0.006	0.004	0.002	0.001	0.001	0.001
22 ...	0.803	0.647	0.422	0.278	0.184	0.123	0.083	0.056	0.046	0.038	0.026	0.018	0.013	0.009	0.007	0.006	0.004	0.003	0.001	0.001	0.001	0.001
23 ...	0.795	0.634	0.406	0.262	0.170	0.112	0.074	0.049	0.040	0.035	0.022	0.015	0.010	0.007	0.006	0.005	0.005	0.002	0.001	0.001	0.001	0.001
24 ...	0.788	0.622	0.390	0.247	0.158	0.102	0.066	0.043	0.035	0.028	0.019	0.013	0.008	0.006	0.005	0.004	0.003	0.002	0.001	0.001	0.001	0.001
25 ...	0.780	0.610	0.375	0.235	0.146	0.092	0.059	0.038	0.030	0.024	0.016	0.010	0.007	0.005	0.004	0.003	0.002	0.001	0.001	0.001	0.001	0.001
26 ...	0.772	0.598	0.361	0.220	0.135	0.084	0.053	0.033	0.026	0.021	0.014	0.009	0.006	0.004	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.001
27 ...	0.764	0.586	0.347	0.207	0.125	0.076	0.047	0.029	0.023	0.018	0.011	0.007	0.005	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001
28 ...	0.757	0.574	0.333	0.196	0.116	0.069	0.042	0.026	0.020	0.016	0.010	0.006	0.004	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001
29 ...	0.749	0.563	0.321	0.185	0.107	0.063	0.037	0.022	0.017	0.014	0.008	0.005	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001
30 ...	0.742	0.552	0.308	0.174	0.099	0.057	0.033	0.025	0.015	0.012	0.007	0.004	0.003	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
40 ...	0.672	0.453	0.208	0.097	0.046	0.022	0.011	0.005	0.004	0.003	0.001	0.001										
50 ...	0.608	0.372	0.241	0.054	0.021	0.009	0.005	0.004	0.001	0.001												

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**Table Q4 (a)**

	Plant A	Plant B	Plant C
Plant life (years)	15	15	15
Total hours / life	129,600	129,600	129,600
Cost of plant (RM)	140,000	180,000	210,000
Failure rate (failures / hour)	0.0005	0.0001	0.0002
Failure cost (RM/failure)	4,500	5,000	5,000
Equipment overhaul required every... (year)	3	5	6
Each overhaul cost (RM)	8,000	12,000	20,000
Operating @ routine maintenance cost (RM/hour)	1.00	0.95	0.90
Disposal cost at retirement (RM)	10,000	10,000	10,000

**Table Q4 (b)**

	Stable economy	Economic downturn
Anticipated to fail (year)	3	3
Interest rate (%)	15	8