



FINAL EXAMINATION

COURSE	: INTERMEDIATE FINANCIAL MANAGEMENT
COURSE CODE	: PFN2133
DURATION	: 2 HOURS

INSTRUCTIONS TO CANDIDATES :

1. This question paper consists of **THREE (3)** questions.
2. Answer ALL questions in the Answer Booklet provided.
3. Please check to make sure that this examination pack consists of:
 - i. The Question Paper
 - ii. An Answer Booklet
 - iii. Appendix 1 - PVIF and PVIFA tables
 - iv. Appendix 2 - The Formula List
4. Do not bring any material into the examination hall unless permission is given by the invigilator.
5. Please write your answer using a ball-point pen.

MYKAD NO : _____

ID. NO. : _____

LECTURER : _____

SECTION : _____

DO NOT OPEN THE QUESTION PAPER UNTIL YOU ARE TOLD TO DO SO

The question paper consists of 04 printed pages

OCT2024/B/PFN2133

1. (25 points)

- a. Awan Nano Sdn Bhd is evaluating a project with an initial investment of RM150,000. The project is expected to generate an annuity of cash inflows of RM40,000 for five years. Determine the internal rate of return (IRR) for the project. (5 points)
- b. Betty La Fea Sdn Bhd is considering the purchase of a new production machine under its expansion programme. The new machine costs RM160,000. The transportation costs of RM2,000, installation cost of RM3,000, and import duties of RM1,000 will be incurred. The company is also required to increase its inventory level by RM15,000 and account payable is expected to increase by RM10,000. In order to use this machine efficiently, the company has to send the two workers for training at a total cost of RM5,000. The machine is expected to have a useful life of six (6) years, with a salvage value of RM40,000.

The new machine is expected to increase sales by RM100,000 per year for the first three years and RM140,000 for the remaining of its useful life. The purchase of the new processing machine will reduce in electricity charges by RM11,000 per year and increase in operation costs by RM14,000 per year. In addition, the maintenance expenses will also go up by RM6,000 per year.

The corporate tax rate is 25% and its cost of capital is 10%.

Required:

- i. Calculate the initial outlay. (4 points)
- ii. Calculate the after-tax annual differential cash flow. (8.5 points)
- iii. Calculate the terminal cash flow. (1.5 points)
- iv. Calculate the net present value. (6 points)

2. (25 points)

- a. Fido Bhd plans to invest a total of RM35 million in capital projects next year. The firm's present capital structure is as follows:

Debt	25%
Preferred share	25%
Common share	50%

Table 1

To finance the proposed capital projects, the firm plans to issue the following securities:

Common shares

Issue common stocks for RM10 per share. The floatation cost is RM2 per share. The dividend paid last year was RM0.50 per share and is expected to grow at a constant rate of 8% a year.

Preferred shares

Issue a 10% preferred stock at 12% premium. A flotation cost of with 4% of the par value will be incurred. The par value of the preferred stock is RM 100.

Bond

Sell RM1000 par value bonds with 10% annual coupon rate and 10 years maturity period. The bond can be sold for RM950 each and floatation cost of 4% of the par value will be incurred.

The firm expects to have retained earnings of RM20 million available for capital expenditure next year. The company's required rate of return is 12% while the corporate tax rate is 25%.

Required:

- i. Calculate the cost of capital for:
 - a. Debt (6 points)
 - b. Preferred stock (2.5 point)
 - c. Ordinary shares (K_e) (2.5 points)
 - d. Retained earnings (K_e) (2 points)
 - ii. Calculate the maximum capital expenditure. (2 points)
 - iii. Calculate the weighted average cost of capital (WACC) (3 points)
 - iv. By comparing the rate of return above, and the weighted average cost of capital (WACC), should Fido Bhd invest into the project. Why? (2 points)
- b. Dido Bhd intends to release 12% irredeemable bonds which currently sold at 10% premium. The bond charged 8% issuance cost on par value and 25% corporate tax. Determine the after-tax cost of the bond. (5 points)

3. (10 points)

Magnifique Sdn Bhd produces high-quality widgets and is currently analyzing its financial performance. Below is the following information for the most recent year.

Sales revenue	RM1,000,000
Variable costs	RM400,000
Fixed costs	RM300,000
Interest expenses	RM50,000

Table 2

Assume the company tax rate of 30%.

Required:

- i. Using the information provided, prepare an income statement for Magnifique Sdn Bhd. (3 points)
- ii. Calculate the degree of operating leverage (DOL). (1 point)
- iii. Calculate the degree of financial leverage (DFL). (1 point)
- iv. Calculate the degree of combined leverage (DCL). (1 point)
- v. If sales increase by 10%, what is the effect to earnings before interest and taxes. (2 points)
- vi. If earnings before interest and taxes decrease by 10%, how many changes in earnings per share? (2 points)

END OF QUESTION PAPER

Present value interest factor of \$1 per period at i% for n periods, PVIF(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	18%	20%	21%	22%	23%	24%	25%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8621	0.8475	0.8333	0.8264	0.8197	0.8130	0.8065	0.8000
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.7972	0.7695	0.7432	0.7182	0.6944	0.6830	0.6719	0.6610	0.6504	0.6400
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7118	0.6750	0.6407	0.6086	0.5787	0.5645	0.5507	0.5374	0.5245	0.5120
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6355	0.5921	0.5523	0.5158	0.4823	0.4665	0.4514	0.4369	0.4230	0.4096
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5674	0.5194	0.4761	0.4371	0.4019	0.3855	0.3700	0.3552	0.3411	0.3277
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5066	0.4556	0.4104	0.3704	0.3349	0.3186	0.3033	0.2888	0.2751	0.2621
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4523	0.3996	0.3538	0.3139	0.2791	0.2633	0.2486	0.2348	0.2218	0.2097
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4039	0.3506	0.3050	0.2660	0.2326	0.2176	0.2038	0.1909	0.1789	0.1678
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3606	0.3075	0.2630	0.2255	0.1938	0.1799	0.1670	0.1552	0.1443	0.1342
10	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3220	0.2697	0.2267	0.1911	0.1615	0.1486	0.1369	0.1262	0.1164	0.1074
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.2875	0.2366	0.1954	0.1619	0.1346	0.1228	0.1122	0.1026	0.0938	0.0859
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2567	0.2076	0.1685	0.1372	0.1122	0.1015	0.0920	0.0834	0.0757	0.0687
13	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2292	0.1821	0.1452	0.1163	0.0935	0.0839	0.0754	0.0678	0.0610	0.0550
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2046	0.1597	0.1252	0.0985	0.0779	0.0693	0.0618	0.0551	0.0492	0.0440
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.1827	0.1401	0.1079	0.0835	0.0649	0.0573	0.0507	0.0448	0.0397	0.0352
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1631	0.1229	0.0930	0.0708	0.0541	0.0474	0.0415	0.0364	0.0320	0.0281
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1456	0.1078	0.0802	0.0600	0.0451	0.0391	0.0340	0.0296	0.0258	0.0225
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1300	0.0946	0.0691	0.0508	0.0376	0.0323	0.0279	0.0241	0.0208	0.0180
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1161	0.0829	0.0596	0.0431	0.0313	0.0267	0.0229	0.0196	0.0168	0.0144
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1037	0.0728	0.0514	0.0365	0.0261	0.0221	0.0187	0.0159	0.0135	0.0115
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.0926	0.0638	0.0443	0.0309	0.0217	0.0183	0.0154	0.0129	0.0109	0.0092
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.0826	0.0560	0.0382	0.0262	0.0181	0.0151	0.0126	0.0105	0.0088	0.0074
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0738	0.0491	0.0329	0.0222	0.0151	0.0125	0.0103	0.0086	0.0071	0.0059
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0659	0.0431	0.0284	0.0188	0.0126	0.0103	0.0085	0.0070	0.0057	0.0047
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0588	0.0378	0.0245	0.0160	0.0105	0.0085	0.0069	0.0057	0.0046	0.0038

Present value interest factor of an (ordinary) annuity of \$1 per period at i% for n periods, PVIFA(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	18%	20%	21%	22%	23%	24%	25%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8621	0.8475	0.8333	0.8264	0.8197	0.8130	0.8065	0.8000
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6052	1.5656	1.5278	1.5095	1.4915	1.4740	1.4568	1.4400
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2459	2.1743	2.1065	2.0739	2.0422	2.0114	1.9813	1.9520
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.7982	2.6901	2.5887	2.5404	2.4936	2.4483	2.4043	2.3616
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.2743	3.1272	2.9906	2.9260	2.8636	2.8035	2.7454	2.6893
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.6847	3.4976	3.3255	3.2446	3.1669	3.0923	3.0205	2.9514
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.0386	3.8115	3.6046	3.5079	3.4155	3.3270	3.2423	3.1611
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.3436	4.0776	3.8372	3.7256	3.6193	3.5179	3.4212	3.3289
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.6065	4.3030	4.0310	3.9054	3.7863	3.6731	3.5655	3.4631
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	4.8332	4.4941	4.1925	4.0541	3.9232	3.7993	3.6819	3.5705
11	10.368	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.0286	4.6560	4.3271	4.1769	4.0354	3.9018	3.7757	3.6564
12	11.255	10.575	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.1971	4.7932	4.4392	4.2784	4.1274	3.9852	3.8514	3.7251
13	12.134	11.348	10.635	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.3423	4.9095	4.5327	4.3624	4.2028	4.0530	3.9124	3.7801
14	13.004	12.106	11.296	10.563	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.4675	5.0081	4.6106	4.4317	4.2646	4.1082	3.9616	3.8241
15	13.865	12.849	11.938	11.118	10.380	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.5755	5.0916	4.6755	4.4890	4.3152	4.1530	4.0013	3.8593
16	14.718	13.578	12.561	11.652	10.838	10.106	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.6685	5.1624	4.7296	4.5364	4.3567	4.1894	4.0333	3.8874
17	15.562	14.292	13.166	12.166	11.274	10.477	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	5.7487	5.2223	4.7746	4.5755	4.3908	4.2190	4.0591	3.9099
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.3719	8.7556	8.2014	7.2497	6.4674	5.8178	5.2732	4.8122	4.6079	4.4187	4.2431	4.0799	3.9279
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.6036	8.9501	8.3649	7.3658	6.5504	5.8775	5.3162	4.8435	4.6346	4.4415	4.2627	4.0967	3.9424
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.8181	9.1285	8.5136	7.4694	6.6231	5.9288	5.3527	4.8696	4.6567	4.4603	4.2786	4.1103	3.9539
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.2922	8.6487	7.5620	6.6870	5.9731	5.3837	4.8913	4.6750	4.4756	4.2916	4.1212	3.9631
22	19.660	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.4424	8.7715	7.6446	6.7429	6.0113	5.4099	4.9094	4.6900	4.4882	4.3021	4.1300	3.9705
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.5802	8.8832	7.7184	6.7921	6.0442	5.4321	4.9245	4.7025	4.4985	4.3106	4.1371	3.9764
24	21.243	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.7066	8.9847	7.7843	6.8351	6.0726	5.4509	4.9371	4.7128	4.5070	4.3176	4.1428	3.9811
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.8226	9.0770	7.8431	6.8729	6.0971	5.4669	4.9476	4.7213	4.5139	4.3232	4.1474	3.9849

FORMULA LIST

$$Pp = \text{Initial Outlay} / \text{Constant annual cash flow}$$

$$Pp = \text{Year before recovery} + \left[\frac{\text{Unrecovered cost at beginning of year}}{\text{Cash flow during that year}} \right]$$

$$\text{Annual Depreciation} = \frac{(\text{Cost of new machine} - \text{Expected Salvage value})}{\text{Number of years of useful life}}$$

$$NPV = \text{Total PV} - \text{Initial Outlay}$$

$$IRR = a\% + [(x - y) / (x - z)] \times (b\% - a\%)$$

$$PI = 1 + (NPV / \text{Initial Outlay})$$

$$Kd = CP + \frac{(\text{Par} - (\text{CMP} - \text{Other Costs}))}{\frac{n}{2}}$$

$$Kdat = Kd (1 - T)$$

$$Kps = D / (\text{CMP} - \text{Other Costs})$$

$$Ke = D1 / \text{CMP} + g$$

$$Kne = D1 / (\text{CMP} - \text{Other Costs}) + g$$

$$WACC = (Kd (1 - T) \times Wd) + (Ke \times We) + (Kps \times WPs)$$

$$DOL = \text{Contribution} / \text{EBIT}$$

$$DFL = \text{EBIT} / (\text{EBIT} - \text{Interest})$$

$$DCL = DOL \times DFL$$

APPENDIX 2