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**IT Project Management**

**Lab 04**

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**Task 1:**

Year Project A Project B Project C

0 -8000 -8000 -10000

1 4000 1000 2000

2 4000 2000 2000

3 2000 4000 6000

4 1000 3000 2000

5 500 9000 2000

6 500 -6000 2000

NetP 4000 5000 6000

NPV@8% 2110.8 2365 2421

NPV@10% 1720 1818 1716

NPB@12% 1356 1308 1070

Based on the results obtained from calculating the Net present value for each project at different discount rates it can be said that Project C is the most profitable at 8%, Project B is most profitable at 10% and Project A is most profitable at 12%.

**Project A**

Y1:8% - 4000 x 0.9259 = 3703.6

10% - 4000 x 0.9091 = 3636.4

12% - 4000 x 0.8929 = 3571.6

Y2: 4000 x 0.8573 = 3429.2

4000 x 0.8264 = 3305.6

4000 x 0.7927 = 3170.8

Y3: 2000 x 0.7938 = 1587.6

2000 x 0.7513 = 1502.6

2000 x 0.7118 = 1423.6

Y4: 1000 x 0.7350 = 735

1000 x 0.6830 = 683

1000 x 0.6335 = 633.5

Y5: 500 x 0.6806 = 340.3

500 x 0.6209 = 310.45

500 x 0.5674 = 283.7

Y6: 500 x 0.6302 = 315.1

500 x 0.5645 = 282.25

500 x 0.5066 = 253.3

**Project B**

Y1: 8% -1000 x 0.9259 = 925.9

10% -1000 x 0.9091 = 909.1

12% -1000 x 0.8929 = 892.9

Y2: 2000 x 0.8573 = 1714.6

2000 x 0.8264 = 1652.8

2000 x 0.7927 = 1585.4

Y3: 4000 x 0.7938 = 3175.2

4000 x 0.7513 = 3005.2

4000 x 0.7118 = 2847.2

Y4: 3000 x 0.7350 = 2205

3000 x 0.6830 = 2049

3000 x 0.6335 = 1900.5

Y5: 9000 x 0.6806 = 6125.4

9000 x 0.6209 = 5588.1

9000 x 0.5674 = 5106.6

Y6: -6000 x 0.6302 = -3781.2

-6000 x 0.5645 = -3387

-6000 x 0.5066 = -3039.6

**Project C**

Y1 8% - 2000 x 0.9259

10% - 2000 x 0.9091

12% - 2000 x 0.8929

Y2 2000 x 0.8573 = 1714.6

2000 x 0.8264 = 1652.8

2000 x 0.7927 = 1585.4

Y3 6000 x 0.7938 = 4762.8

6000 x 0.7513 = 4507.8

6000 x 0.7118 = 4270.8

Y4 2000 x 0.7350 = 1470

2000 x 0.6830 = 1366

2000 x 0.6335 = 1267

Y5 2000 x 0.6806 = 1361.2

2000 x 0.6209 = 1241.8

2000 x 0.5674 = 1134.8

Y6 2000 x 0.6302 = 1260.4

2000 x 0.5645 = 1129

2000 x 0.5066 = 1013.2

**Task 2:**

Payback period: The payback period is 5 years. The total net operating cost by Year 5 is €191,000 and the estimated net benefits by year 5 is €200,000.

Return on investment:

Total benefits 18,000 + 23000 + 30500 + 39500 + 48000 + 52000 + 57000 = 268000

Average benefits = 268,000 / 8 = 33500

Return on investment = (33500 / 225000) x 100 = 14.89%

NPV:

Y0: -150,000 = -150,000

Y1: 18000 x 0.9524 = 17143.2

Y2: 23000 x 0.9070 = 20861

Y3: 30500 x0.8638 = 26345.9

Y4: 48000 x 0.8227 = 39489.6

Y5: 52000 x 0.7835 = 40742

Y6: 57000 x 0.7462 = 42533.4

Total: €37,115.10