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**Question 4: Financial Accounting****(32 points)**

John Doe is a newly hired financial executive at ABC Airlines (hereafter ABC), a starting-up airline company. ABC is just starting its business at the beginning of the fiscal year, which matches the calendar year. Now ABC is trying to determine how it will finance its first airplane whose quoted price is one million CU (currency unit). At present, there are three alternatives, Plans A through C as shown below:

Plan A: Borrow 1 million from XXX Bank at 5% p.a. XXX Bank says that interest payments are due at each year end, and the principal should be repaid at the end of the fifth year.

Plan B: Use a lease offered by YYY Lease Company. YYY says that ABC should pay 0.231 million CU for five years, each at the year end. At the end of the fifth year, the ownership of the airplane will be passed to ABC. This lease qualifies as finance lease (assume an interest rate of 5% p.a.).

Plan C: Use lease by ZZZ Lease Company. ZZZ says that ABC should pay 0.2 million CU for five years at each year end (non-cancelable). At the end of the fifth year, the airplane will be returned to ZZZ. This lease qualifies as an operating lease.

Immediately before acquiring the airplane by one of the alternatives above, the balance sheet of ABC appeared as shown in Exhibit 1.

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Exhibit 1 ABC Airlines  
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Balance Sheet immediately before acquiring an airplane (in '000 CU)

|                    |       |   |       |
|--------------------|-------|---|-------|
| Current Assets     | 1,000 | Current Liabilities                           | 0     |
| Flight equipment   | 0     | Non-current Liabilities                       | 0     |
| Other Fixed Assets | 500   | Shareholders' Equity                          | 1,500 |
| -----              |       |   |       |
| Total Assets       | 1,500 | Total Liabilities<br>and Shareholders' Equity | 1,500 |

- a) Prepare ABC's pro forma balance sheets immediately after it acquired the airplane by each alternative. (15 points)

Notes: Lease liabilities are recognized both as current liabilities and as non-current liabilities. The portion of lease liabilities which is repaid in a year is recognized as current liabilities.

Plan A

Balance Sheet immediately after acquiring an airplane (in '000 CU)

|                    |  |  |  |
|--------------------|--|--|--|
| Current Assets     |  | Current Liabilities                        |  |
| Flight equipment   |  | Non-current Liabilities                    |  |
| Other Fixed Assets |  | Shareholders' Equity                       |  |
| Total Assets       |  | Total Liabilities and Shareholders' Equity |  |

Plan B

Balance Sheet immediately after acquiring an airplane (in '000 CU)

|                    |  |  |  |
|--------------------|--|--|--|
| Current Assets     |  | Current Liabilities                        |  |
| Flight equipment   |  | Non-current Liabilities                    |  |
| Other Fixed Assets |  | Shareholders' Equity                       |  |
| Total Assets       |  | Total Liabilities and Shareholders' Equity |  |

Plan C

Balance Sheet immediately after acquiring an airplane (in '000 CU)

|                    |  |  |  |
|--------------------|--|--|--|
| Current Assets     |  | Current Liabilities                        |  |
| Flight equipment   |  | Non-current Liabilities                    |  |
| Other Fixed Assets |  | Shareholders' Equity                       |  |
| Total Assets       |  | Total Liabilities and Shareholders' Equity |  |

- b) John expects that under Plan A, the net income of ABC for the first year after acquiring the airplane will be 0.5 million CU. Calculate the expected net income for the same year under Plans B and C. Ignore any tax effects. If necessary, assume a five-year straight-line depreciation method with zero residual value for the airplane. (10 points)
- c) Assuming all the Plans are based on the same underlying assumptions and the risk of price fluctuation of the airplane is negligible, estimate the expected value of the airplane at the end of the fifth year. (7 points)