# Engineering Economy

**Homework No. 2**

Deadline for submission is 15th of May 2024

1. An engineer invested in consulting company. The capital cost was $30,000. His plan was to sell the company after 9 years. The running cost was $4,500 per year and the income was $7500 per year except for year 4 where he paid from company pocket $25,000. The capital cost was taken from a bank. The annual interest rate is 6%.
    a. Draw the cash flow.
    b. Find the future worth that is feasible for him if he sells the company at the end of year 9.
    c. If the company is sold by $95,000, what will be the net cash flow for the engineer?
2. If you invest $25,000 at 8% per year compounded semiannually, approximately how much money will be in the account at the end of year 10?
3. Perform a present worth analysis of equal-service stone crushers with the costs shown below if the MARR is 6.5% per year. Assume the revenues for all types are the same.

| **Cost Type** | **A** | **B** | **C** |
|---|---|---|---|
| First cost, $ | -60,000 | -50,500 | -25,500 |
| Annual operating cost, $ | -2200 | -1750 | -30000 |
| Salvage value, $ | 50000 | 35000 | 15000 |
| Life, years | 5 | 5 | 5 |