

INSE 6230: Assignment 2 - Winter 2018

(0% of final grade)

1. A project in progress has the following characteristics at the present time: SPI=1.35, CPI=0.7, BAC=\$6,400,000, and EAC (t=now) = \$7,000,000. Calculate AC, PV, EV, ETC and VAC under the 2 following situations:

- (1) The project continues under the conditions as originally planned
- (2) We expect further problems.

2. A company is considering several projects for investment. Information on each project is in the table. The company can consult an expert regarding the details related to Project #4. The expert advice would cost the company additional \$500 and, if consulted, there is 60% chance that the expert will recommend Project #4. If Project #4 is in fact recommended by the expert then the resulting profit remains the same, but the probability of a successful completion is doubled. Since not all up-front investments are recovered, they are shown as negative profits. Draw a decision tree, calculate the EMV for each node, indicate the best decisions to take and choose the best project(s) for investment.

Project	Chance of Outcome	Estimated Profits
#1	20%	\$12,000
	30%	-\$6,000
	50%	\$10,000
#2	50%	\$15,000
	50%	-\$1,000
#3	10%	-\$1,000
	70%	\$8,000
	20%	-\$1,000
#4	40%	\$14,000
	60%	\$0

3. A contractor has agreed to perform a work for a buyer, but the details of the contract are still not finalized. The contractor has been given a choice to select between Fixed Price Incentive (FPI) contract and Cost Plus Incentive Fee (CPIF) contract. The following has been determined for both of the types: target cost = \$500,000; target fee=\$50,000; and sharing ratio of 70/30. Moreover, for the FPI contract ceiling price would be \$600,000, and for the CPIF contract minimum fee would be \$30,000 and maximum fee \$60,000. Calculate the contractor's reimbursement and the contractor's profit for the following three possibilities of the actual cost of performing the work:
 - a. \$450,000
 - b. \$560,000
 - c. \$590,000

Which of the contract types should the contractor select?