FINAL EXAMINATION – February 6th, 2013

## name:

# Scheduling (5 points)

The following project activities with associated costs are given (T in days, C in $1,000). If the overhead cost is 2,000$/day, what is the optimal project duration?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Activity | predecessor | T normal | T crashed | C normal | C crashed |
| A |  | 6 | 3 | 6 | 9 |
| B | A | 9 | 5 | 9 | 12 |
| C |  | 3 | 2 | 4.5 | 7 |
| D | C | 5 | 2 | 10 | 16 |
| E | D | 2 | 2 | 2 | 2 |
| F | C | 4 | 1 | 6 | 10 |
| G | F | 8 | 5 | 8 | 10 |

# Organization (5 points)

With explicit reference to “The AtekPC Project Management Office” business case, please list the main objectives of a PMO and point out the most important factors that have to be considered when implementing an effective PMO in a company.

# Monitoring (7 points)

A contract to erect a large oil tank is expected to last 6 weeks. The tank requires welding 360 steel slabs. Estimated total man hours are 1080, with cost of 20$/h. All slabs are available on site on first day and erection starts immediately. The cost per hour does not change during the process.

During the first week, 50 slabs are erected, using 200 hrs.

During the second week, additional 60 slabs are constructed, using the same 200 hrs.

During week 3, 90 slabs are welded, using 200 hrs.

At the time now, four full weeks into the project, 280 slabs are the total slabs installed, with 800 hours consumed so far.

Assume the contract provides for the project to be compensated based on cost plus a 4,000 euro fixed fee payment scheme. Also, either savings or cost overrun between the original budget and the actual cost must be shared equally.

Assume you are the contractor PM. Please compute appropriate EAC and AC for the project to be reported to your client, and justify your calculations.

# Contracting (5 points)

A car manufacturing company is considering the brown-field renovation of one of its former manufacturing facilities. As part of this program, the body painting line requires very urgent and specialized revamping, which is made particularly complex due to the unavailability of the original as-built drawings.

As the car manufacturer’s Project Manager charged with the responsibility of contracting out the painting line renovation project, please propose a suitable contract organization, payment scheme and award methodology.