**FINAL EXAMINATION – June 13th, 2016**

## name:

# Contract Definition (4 points)

The Sands Hotel organization has bought a casino a block off the famous boardwalk in Atlantic City, New Jersey. The facility requires renovation and improvement works. While most of the well-known profitable casinos in town benefit from boardwalk frontage, this one is not visible from the well-trafficked strip. To achieve profitability, Sands realizes that the project to renovate the casino building needs a high-attracting architecture and upscale quality to draw a significant numbers of patrons from the boardwalk. Also, it is mandatory to open the new facility by the next summer touristic peak period.

Suppose to be the Sands project manager facing the problem of defining the contract organization. What would you suggest with regard to the delivery system, the payment scheme and the award method to take on?

# Contract Management (5 points)

Assume to be part of a software development and IT service providing company. You are the project manager of a project to develop a custom business software solution for one of your corporate clients.

The contract deadline is 12 months. The software development contract provides for the project to be compensated based on cost plus a 200,000 euro fixed fee payment scheme. To provide incentive for careful cost management, any savings between the original budget and the actual cost must be shared, with 70% of savings going to customer and 30% to contractor.

Following is the status report issued today, 8 months after the project start date:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task name** | **Budget at completion [k€]** | **% WS** | **% WP** | **Actual value [k€]** |
| Feasibility analysis | 20 | 100 | 100 | 18 |
| System design | 100 | 100 | 100 | 90 |
| Functional specs | 40 | 100 | 90 | 32 |
| Development | 240 | 90 | 80 | 180 |
| Testing | 80 | 70 | 50 | 36 |
| Pilot test | 90 | 20 | 10 | 8 |
| Deployment site A | 30 | 0 | 0 | 0 |
| Deployment site B | 20 | 0 | 0 | 0 |
| *TOTAL* | *620* |  |  | *364* |

Today you receive a call from your client’s representative manager, that forces you to release the project savings for her to reinvest in additional project upgrades soon. How much money would you release as project savings to both satisfy your customer and protect yourself?

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# Probabilistic Scheduling (5 points)

A project to develop a new manufacturing facility requires executing the following tasks:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TASK** | **optimistic duration [weeks]** | **most likely duration [weeks]** | **pessimistic duration [weeks]** | **PREDECESSOR** |
| Basic design | 4 | 8 | 18 |  |
| Detailed design | 9 | 12 | 18 | basic design |
| Procurement | 24 | 26 | 40 | basic design |
| Civil works erection | 12 | 14 | 22 | detailed design |
| Assembly of production line | 12 | 16 | 18 | procurement; civil works erection |
| Testing | 3 | 4 | 8 | assembly of production line |

You are requested to indicate the probability of completing the project within 60 weeks.

NORMAL DISTRIBUTION TABLE

