## **QUESTION 1**

BodyCare, a Norwegian company, is actively involved in the creation, production, marketing, and distribution of hair and body care products. Faced with stiff competition in the market, BodyCare's leadership has resolved to initiate a new project focused on developing, producing, and marketing a unique shampoo designed for men in the Norwegian market. Let's imagine that you have been chosen to lead this project as the project manager.

- a) Discuss what you would emphasize during the startup phase of your project.
- b) By the senior managers in BodyCare you have been asked to come up with a budget. Discuss the two main ways of developing a project budget and their advantages and disadvantages, before concluding which way you prefer. Also draw an illustration showing the two different approaches.
- c) Soon you are going to put together your team with personnel from BodyCare. Your analysis of the workload shows that during the initiation and planning phase you need 9 team members, some working part-time, others full-time on the project. You have to select an external organization structure for your project. Discuss your choice and the selected structure's advantages and disadvantages. Also draw an illustration showing the organizational structure.
- d) After a few days you are planning to arrange a brainstorming meeting among the teammembers with the purpose of identifying ideas for the development of the new shampoo.
  Suggest and discuss the appropriate internal organizational structure (team structure) for this event.
- e) Draw and discuss the project manager's compass (the six lookings). Discuss also what you think are your most important tasks as the project manager.
- f) Identify three risks of this project. Show how the risk map/matrix can be used to analyze and rank the three risks that you have identified.
- g) Discuss briefly why benefit management/realization often is difficult. Discuss also what can be done to maximize the benefits from this project.

## **QUESTION 2**

You are given the following project information. The costs are linear (distributed) for each activity. The duration for each activity is shown in the Gantt diagram.

Act.	Duration (days)	Pre- decessor	Planned Days										
			costs per activity	1	2	3	4	5	6	7	8	9	10
А	2	-	6										
В	3	-	15										
С	2	А	8										
D	1	A, B	6										
Е	2	C, D	10										
F	2	C, D	12										
G	3	В	9										
Н	4	E, F, G	16										

The project is being controlled after five days. Then you are given the following information:

Activity	% completed	Actual costs
А	100%	7
В	100%	15
С	100%	10
D	100%	6
Е	0%	0
F	50%	5
G	33 <sup>1</sup> / <sub>3</sub> %	4
Н	0%	0

- a) Draw the project network. How long will it take to complete the project?
- b) Identify the critical activities and the critical path(s). Explain what a critical activity is.
- c) Which activities have slack (float) and how much. Explain what slack (float) is.
- d) Explain briefly how to add time buffer in the plan (network) so you have some extra spare time to go on when you are not sure if the schedule holds. How would you solve it in this project?
- e) Develop a Gantt-chart for the project where the activities start at the Latest start. Mark the critical activities.
- f) The project manager wants to end project one day earlier than scheduled. Each of the activities C, E, F and G may be reduced by one day by increasing the resource usage, e.g. by using extra staff and overtime. For activity C it will cost 1, for E it will cost 3, for F it will cost 2 and for G it will cost 4. How would you solve this and how much will it cost? Explain.

## When solving the remaining questions, ignore f).

- g) Summarize the total cost for each day and calculate accumulated cost. What is the total planned cost for this project (the budget)? (Remember: The costs are linear for each activity.)
- h) What is PC, AC and EV after 5 days? Calculate CV, BV and SV. Describe the project's status after 5 days.
- i) How much work remains after 5 days? Calculate CPI, SPI, and new ECAC and ETAC. What is the crucial assumption this calculation of new total cost and duration is based on?