## **QUESTION 1**

- a) What are the characteristics of a project?
- b) Describe the external organizational structure called matrix organization and its advantages and disadvantages. Draw an illustration showing the structure.
- c) Discuss what should be emphasized when selecting the team members to a new project? Give a brief description of the isomorphic team structure and in which situations this is a suitable way of organizing the project work. Draw an illustration showing the structure.
- d) Give a brief description of what is meant by critical success factors. View examples of the five critical success factors for a project.
- e) Discuss what characterizes an effective and good project manager.

## **QUESTION 2**

Stud Invest AS has initiated a project that aims to build student housing on the vacant land between BI and Storo Shopping Mall. The plan is to build a large building with approx. 150 rooms. The project is now in a preliminary study, but there are still many pieces that must be in place before construction can begin. If everything goes according to the plan, Stud Invest AS hopes to start construction next year.

- a) Identify four key stakeholders to this project. Make a stakeholder analysis of their relation to the project.
- b) Describe what a milestone is. Develop a milestone plan (with five milestones) for this project.
- c) What usually contains a mandate? Create a proposal for a mandate for this project with emphasis on the choice of project name, purpose and goals for the project.
- d) Identify three risks of this project. Discuss briefly what the purpose of analyzing risks. Show how the risk map/matrix can be used to analyze the three risks you have identified.
- e) What characterizes a successful project? Discuss success criteria for the student housing project.

## **QUESTION 3**

Activities	Duration (days)	Predecessor	Planned cost/ budget (per day)
А	3	-	50
В	5	-	100
С	2	А	50
D	4	А	100
Е	3	А	50
F	2	C, D	100
G	3	B, E, F	100

You are given the following project information:

- a) Draw the project network. How long will it take to complete the project?
- b) Identify the critical activities. Explain what a critical activity is.
- c) Calculate the slack for each activity. Explain what slack is.
- d) Develop a Gantt-chart for the project where the activities start at Earliest Start.
- e) Create a resource/cost table where you summarize the total cost for each day and also calculate accumulated cost. What is the total planned cost for this project (the budget)?

After 6 days the following information is given:

Activity	% completed	
А	100%	
В	100%	
С	100%	
D	75%	
Е	66 <sup>2</sup> / <sub>3</sub> %	
F	0%	
G	0%	

Actual cost after 6 days are 1250.

- f) Calculate SV, CV, BV, CPI, SPI after 6 days.
- g) Based on you data, what is your assessment of the status of the project?