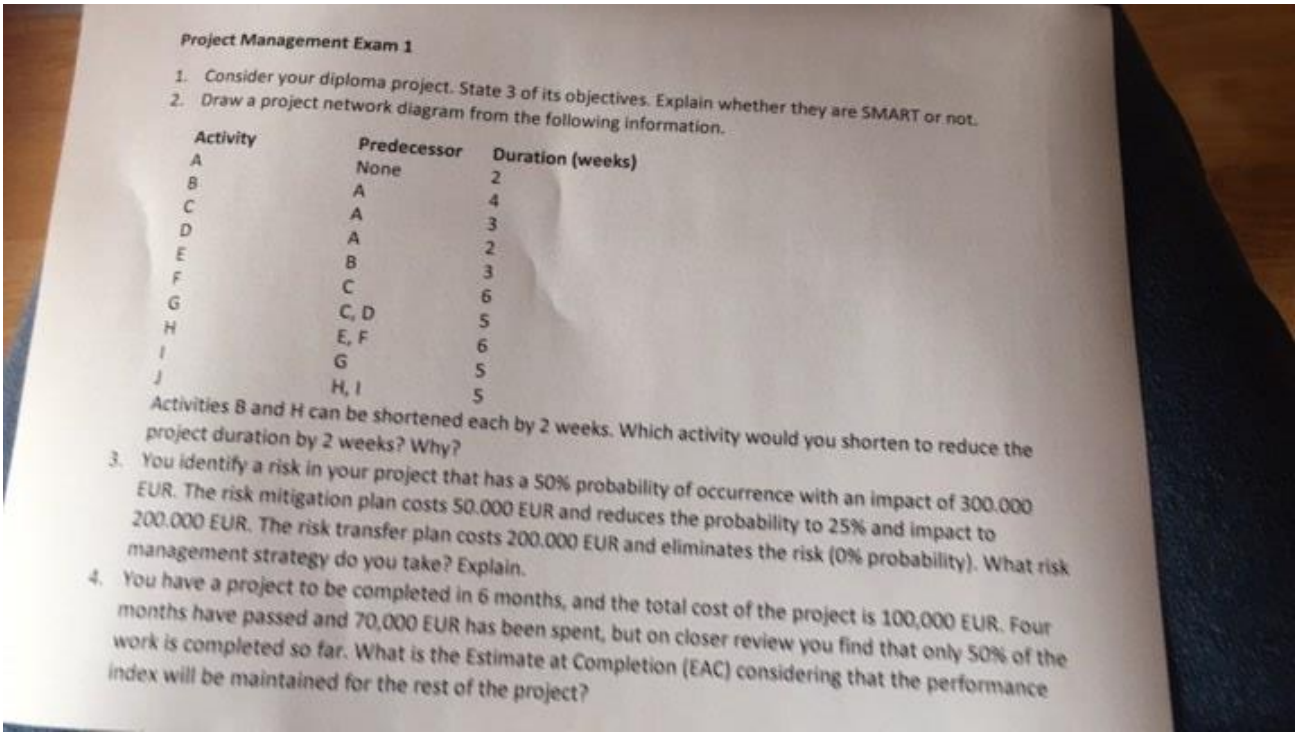
2019_1



Project Management Exam 1

1. Consider your diploma project. State 3 of its objectives. Explain whether they are SMART or not.
2. Draw a project network diagram from the following information.

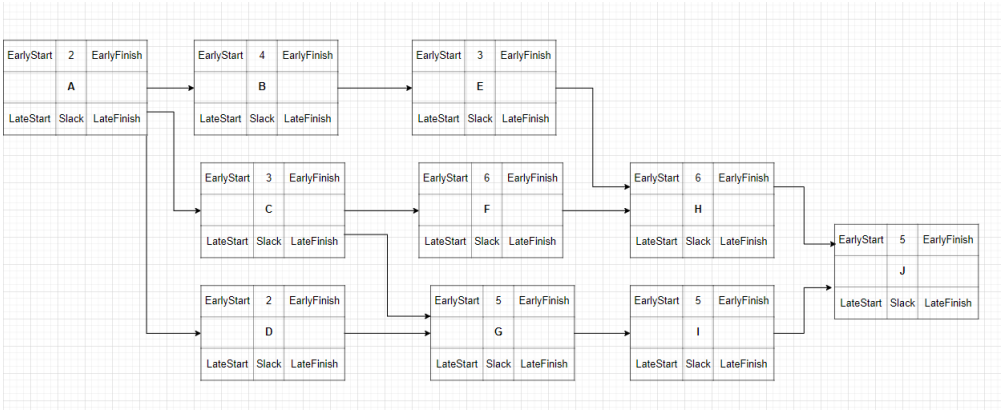
Activity	Predecessor	Duration (weeks)
A	None	2
B	A	4
C	A	3
D	A	2
E	B	3
F	C	6
G	C, D	5
H	E, F	6
I	G	5
J	H, I	5

Activities B and H can be shortened each by 2 weeks. Which activity would you shorten to reduce the project duration by 2 weeks? Why?

3. You identify a risk in your project that has a 50% probability of occurrence with an impact of 300.000 EUR. The risk mitigation plan costs 50.000 EUR and reduces the probability to 25% and impact to 200.000 EUR. The risk transfer plan costs 200.000 EUR and eliminates the risk (0% probability). What risk management strategy do you take? Explain.
4. You have a project to be completed in 6 months, and the total cost of the project is 100,000 EUR. Four months have passed and 70,000 EUR has been spent, but on closer review you find that only 50% of the work is completed so far. What is the Estimate at Completion (EAC) considering that the performance index will be maintained for the rest of the project?

1. Diploma smart objectives
    a. Specific
    b. Measurable (the accuracy)
    c. Achievable
    d. Relevant
    e. Time-bound

- By 27.04.2020 build a system that performs semantic segmentation on video sequences with an accuracy of at least 70%.
- In training the system only use a video dataset sparsely labeled (labels only for 25% of the dataset).
    - Time-bound to training phase
- By 15.05.2020 write 75% of the license thesis.

2. 

A B E H J = 2 + 4 + 3 + 6 + 5 = 20
A C F H J = 2 + 3 + 6 + 6 + 5 = 22 => critical path
A C G I J = 2 + 3 + 5 + 5 + 5 = 20
A D G I J = 2 + 2 + 5 + 5 + 5 = 19

To reduce the project duration, reduce activity H duration since it is on the critical path.

3. Risk prob 50% impact 300 000 EUR
Risk mitigation plan 50 000 EUR and reduces probability to 25% and impact to 200 000.
Risk transfer eliminates the risk and cost 200 000.

No strategy (acceptance) impact: 50/100 * 300000 = 125 000 EUR
Risk mitigation impact: 50 000 + 25/100 * 200 000 = 100 000 EUR
Risk transfer impact: 200 000 EUR

Choose risk mitigation.

4. 6 months, BAC = 100000 EUR.
Current, 4 months passed, AC=70000, 50% of work completed.
EAC if performance index maintained for rest of project?

AC = 70000 EUR
BAC = 100000 EUR
EV = 50 / 100 * 100000 = 50000 EUR

EAC = AC + (BAC – EV) / CPI
CPI = EV / AC
CPI = 0.714
EAC = 140000 EUR