

Il candidato sviluppi il proprio tema scegliendo fra i seguenti:

Tema 1:

PHARMA is a company operating in the biotech industry, with a focus on regenerative medicine. Third semester 2018 will be dedicated to the evaluation and selection of new R&D projects, to be launched in 2019. The following table describes the 9 projects. The R&D director brings into evidence that projects 2, 3 and 6 are linked to the approval of a new regulation concerning stem cells, and the probability of such approval before 2020 is not very high; projects 1, 4, 5 and 6 require the sharing of the same laboratory machineries and, as a consequence, their timing will be problematic.

Projects	1	2	3	4	5	6	7	8	9
Level of internal know-how	High	Low	Low	Very high	Very high	High	Medium	Medium	Very low
Strategic relevance	Medium	High	High	Very high	Low	Medium	Very low	High	Medium
Appropriability	High	Low	Low	High	High	Very high	High	Low	High
Areas of application	Limited	Very wide	Very wide	Very limited	Wide	Wide	Very wide	Limited	Wide
State in the technology life cycle	Growth	Embrionic	Maturity	Embrionic	Growth	Growth	Maturity	Embrionic	Maturity
Technological positioning with respect to competitors	Strong	Weak	weak	Strong	Leader	Tenable	Tenable	Weak	Favourable
Agreements with clients for licensing out results	Yes	Yes	Yes	no	No	Yes	no	no	No
Opportunity for technological partnerships	No	Yes	Yes	no	Yes	Yes	Yes	no	No
Interdependencies*	--	With project 4	--	--	With project 6	--	--	--	With project 1
Need of licensing in	Yes	Yes	no	no	no	no	no	Yes	Yes
Financial data 2018 (€)									
R&D costs	25000	17000	11000	5000	25000	110000	27000	1430000	430000
Other costs	12000	8700	5500	1000	12000	230000	5700	110000	80000
Investments	500000	120000	120000	120000	350000	760000	220000	620000	320000
NPV (risk free)	342739	541162	8886	622506	250417	2493231	183136	5180376	462830

* it means that these projects require some input (e.g. a component, a wip, etc) from the indicated interdependent project to be carried on.

Relying on the available information, define your motivated measure of relevance and risk of each project. In particular explain in detail:

- your “rationale” in defining the criteria relative to relevance or risk
- the weight assigned to each criterion
- the used scales and the scores assigned to each project

Additional information to establish the weight of different criteria relied on experts’ opinion (technical and business experts)

1. For BIO to improve the strategic positioning in the business is crucial (old and new competitors are increasingly threatening the firm)
2. NPV and economic results in general are crucial to maintain the shareholder support on the financial markets as well as to finance the investments
3. As “fundamental factor” of value creation, currently the “appropriability” is considered a little more important than the range of applications
4. Obviously, the robustness (need of new regulation approval) is crucial, but it does not concern all the projects
5. Currently, the overall technical risk (considering all the criteria representing technical risk) is considered more important than the overall commercial risk
6. As concerns the technical risk, the need of external competences is quite more critical than the risk of delay due to the sharing of some equipment among projects
7. The criteria representing commercial risk are considered equivalent in terms of importance

Once the evaluation is finished, please normalize the scores, put manually the projects in a matrix risk/relevance and **select the project portfolio** by taking into account the following further information.

- 1.The investment (amount of resources in \$) required for each project is:

Project	Investment
1	30000
2	60000
3	25000
4	40000
5	20000
6	40000
7	15000
8	30000
9	25000
Tot	285000

2. the available budget is 100.000\$
3. assume slope of the utility straight line =45° starting from the upper part of the matrix

Then analyse the portfolio by taking into account the interdependencies and the conflicts of resources among the projects.

If there is the need of change the portfolio what types of actions do you suggest?

Tema 2:

Nordic Company, a merchandising company, prepares its master budget on a quarterly basis. The following data have been assembled to assist in preparation of the master budget for the second quarter.

- a. As of March 31 (the end of the prior quarter), the company's balance sheet showed the following account balances:

Cash	\$ 9,000	
Accounts receivable	48,000	
Inventory	12,600	
Buildings and equipment (net)	214,100	
Accounts payable		\$ 18,300
Capital stock		190,000
Retained earnings		75,400
	<u>\$283,700</u>	<u>\$283,700</u>

- b. Actual sales for March and budgeted sales for April–July are as follows:

March (actual)	\$60,000
April	\$70,000
May	\$85,000
June	\$90,000
July	\$50,000

- c. Sales are 20% for cash and 80% on credit. All payments on credit sales are collected in the month following the sale. The accounts receivable at March 31 are a result of March credit sales.
- d. The company's gross margin percentage is 40% of sales. (In other words, cost of goods sold is 60% of sales.)
- e. Monthly selling and administrative expenses are budgeted as follows: salaries and wages, \$7,500 per month; shipping, 6% of sales; advertising, \$6,000 per month; other expenses, 4% of sales. Depreciation, including depreciation on new assets acquired during the quarter, will be \$6,000 for the quarter.
- f. Each month's ending inventory should equal 30% of the following month's cost of goods sold.
- g. Half of a month's inventory purchases are paid for in the month of purchase and half in the following month.
- h. Equipment purchases during the quarter will be as follows: April, \$11,500; and May, \$3,000.
- i. Dividends totaling \$3,500 will be declared and paid in June.
- j. Management wants to maintain a minimum cash balance of \$8,000. The company has an agreement with a local bank that allows the company to borrow in increments of \$1,000 at the beginning of each month, up to a total loan balance of \$20,000. The interest rate on these loans is 1% per month, and for simplicity, we will assume that interest is not compounded. The company would, as far as it is able, repay the loan plus accumulated interest at the end of the quarter.

Required:

Using the data above, complete the following statements and schedules for the second quarter:

1. Schedule of expected cash collections:

	April	May	June	Total
Cash sales	\$14,000			
Credit sales	<u>48,000</u>			
Total collections	<u>\$62,000</u>			

2. a. Merchandise purchases budget:

	April	May	June	Total
Budgeted cost of goods sold	\$42,000*	\$51,000		
Add desired ending inventory	15,300†			
Total needs	57,300			
Less beginning inventory	12,600			
Required purchases	<u>\$44,700</u>			

*\$70,000 sales × 60% = \$42,000.
†\$51,000 × 30% = \$15,300.

Schedule of expected cash disbursements for merchandise purchases:

b.

	April	May	June	Total
For March purchases	\$18,300			\$18,300
For April purchases	22,350	\$22,350		44,700
For May purchases				
For June purchases				
Total cash disbursements for purchases	<u>\$40,650</u>			

3. Schedule of expected cash disbursements for selling and administrative expenses:

	April	May	June	Total
Salaries and wages	\$ 7,500			
Shipping	4,200			
Advertising	6,000			
Other expenses	2,800			
Total cash disbursements for selling and administrative expenses ..	<u>\$20,500</u>			

4. Cash budget:

	April	May	June	Total
Cash balance, beginning	\$ 9,000			
Add cash collections	62,000			
Total cash available	<u>71,000</u>			
Less cash disbursements:				
For inventory purchases	40,650			
For selling and administrative expenses	20,500			
For equipment purchases	11,500			
For dividends	—			
Total cash disbursements	<u>72,650</u>			
Excess (deficiency) of cash	(1,650)			
Financing				
Etc.				

5. Prepare an absorption costing income statement for the quarter ending June 30.
6. Prepare a balance sheet as of June 30.

GLI ELABORATI PRODOTTI DOVRANNO ESSERE REDATTI IN FORMA CHIARA ED ORDINATA. LA CAPACITÀ DI SINTESI, L'ORDINE E LA CHIAREZZA, COSTITUIRANNO ELEMENTI DI VALUTAZIONE.