

Group Number: _____ Date: _____ Dimension: Economic

Your Full Name: _____

Economic Dimension

Economics and engineering

Economics and engineering are closely related. Economics has been defined as the social science of _____. With the same appropriateness engineering may be defined to be physical science applied to helping _____ to _____.

Engineering is primarily service to the community to large groups of men, rather than to _____. Unfortunately, many engineers fail to see this clearly. The study of economics should help to develop a _____ in the student of engineering by forcing him to think in terms of groups of men.

An engineer deals largely with _____, but to achieve ultimate results that are not material in character. S/He locates and builds a railroad, a mere material thing. The railroad us to be used by running trains over it – mere material things again. But the most important ultimate purpose and effect of the railroad is to raise the _____ of a region.

The inspiration of a great engineer has frequently come from a vision of the ultimate, not the material, results of his work. You can note that the ultimate result of engineering is expressed in _____.

The future engineer will profit most from the same broad thorough training in economics which is best for the other students just referred to.

Project Evaluation

Another area in which the interests of engineers and economists (and accountants) have overlapped is _____, or the effective use of capital (sometimes called _____). Sooner or later, many engineers will become managers. Engineers played the key role in the development of engineering economy, addressing the need to _____ for jobs, to _____, and to _____ costs.

Seeing economics from this engineering economy perspective, engineers may have tended to assume that it consists of a tool kit of objective techniques that can be used for _____ and _____. Engineering economics is marginal to microeconomics, which is essentially an intellectual system with a _____.

✎ Your best friend has a very good idea of an innovative product and he hopes to make it a real product and sell it to the whole world. He tells you it is his dream project. He asks you to help him to create the detailed design for production and then he will try to find the capital for production. He wants to create a startup company for the product and invite you to be the cofounder of the company. You know that the product is technically feasible but not sure yet if the whole project is financially feasible or not. Please describe the steps you will do to check if the project is financially feasible and based on what factors you will consider to advise your friend whether the project should be carried out or not.