NAME: AGWANIRU ROSEMARY

MATRIC NO:17/ENG01/003

DEPARTMENT: CHEMICAL ENGINEERING

COURSE CODE: ENG384 (ENGINEERING LAW AND MANAGERIAL ECONOMY)

SOLUTION TO SHORT TEST

The American Engineers' Council for Professional Development defines Engineering as: "The creative application of scientific principles to design or develop structures, machines, apparatus, or manufacturing processes, or works utilizing them singly or in combination; or to construct or operate the same with full cognizance of their design; or to forecast their behavior under specific operating conditions; all as respects an intended function, economics of operation and safety to life and property.“

The  economy of Nigeria is a middle-income, [mixed economy](https://en.wikipedia.org/wiki/Mixed_economy) and [emerging market](https://en.wikipedia.org/wiki/Emerging_market), with expanding manufacturing, financial, service, communications, technology and entertainment sectors. It is ranked as the [27th-largest economy in the world in terms of nominal GDP](https://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal)), and the [24nd-largest in terms of purchasing power parity](https://en.wikipedia.org/wiki/List_of_countries_by_GDP_(PPP)). [Nigeria](https://en.wikipedia.org/wiki/Nigeria) has the largest economy in Africa; its re-emergent manufacturing sector became the largest on the continent in 2013, and it produces a large proportion of goods and services for the [West African](https://en.wikipedia.org/wiki/West_Africa) subcontinent.

***Management application*** as a tool in project implementation, monitoring and evaluation in Nigeria is commendable. With regard to limited resources in Nigeria today, the process of management is more than ever before quintessential now, due to dwindling resources of government when budgeting; for efficient capital project monitoring and evaluation to achieve: value for money by cutting down wastes, reduce superfluous design, meet users’ requirements, address technical/environmental/legal/socio-economic issues and project prompt delivery.

Unnecessary cost can be defined as: cost that provides neither additional function, length of life nor user’s benefit and can be as a result of optimization of scare resources to achieve required performance standards at lower cost or improved standards for the same cost. Eliminate all COSTS that do not contribute to the performance of the required FUNCTION (unnecessary cost) or sourcing for an alternative that will equally deliver the same or better function at a reduced cost is one of the step required to optimize the engineering resources and working with the given ***budget***.

In terms of the Legal regulation the ethics and legal frameworks such as applied in the engineering field should ensured while the projects undergo completion