The Management University of Africa

MUA

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POST GRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF MASTER OF ARTS IN DEVELOPMENT STUDIES

MDP 516: PROJECT APPRAISAL AND ANALYSIS

DATE: 31ST JULY 2024

DURATION: 3 HOURS

MAXIMUM MARKS: 60

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **FOUR (4)** questions.
4. Question **ONE is compulsory.**
5. Answer any other **TWO** questions.
6. Question **ONE** carries **30 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided**

QUESTION ONE

Read the Case Study below carefully ad answer the questions that follow:

THIKA THERMAL POWER PROJECT

Thika Thermal power Project located in Kiambu County, 80KM from Nairobi has been considered as one of the fossil-fuel powered plants leading to diversification of the power generating sources in Kenya. The power plant was initiated after being considered a Kenya's Least Cost power development plan which aims at increasing the availability of electricity on the national grid – complementing the Kenya Power and Lighting Company's (KPLC) transmission and substation project.

Thika Thermal power plant is fully aligned with the Country's strategy paper (2008-2013) for Kenya which has been elaborated to support the development of infrastructure to support economic growth and the creation of employment opportunities to reduce poverty. Within this framework, the country specifically intends to address the problems related to the irregularity of its electricity supply. In addition, the project is aligned to the long-term development strategy of the county (vision, 2030), which is aware of the effect of the fact that the costs of energy in Kenya are currently higher than those of other African competing economies.

To stimulate growth and attract investment, Kenya must produce electricity at an economic cost, and increase the efficiency of energy consumption. Aware of its energy needs in order to achieve their objectives of the Vision w2030, the Government has envisioned an ambitious plan to increase its energy production in order to expand current installed capacity.

In order to meet the demand despite the unreliability of the hydropower generation capacity (due to extreme drought experienced within the Country), the government of Kenya is currently obliged to rely on providers of emergency generation capacity. This emergency capacity, while having the advantage of a relatively rapid installation time, is very expensive and highly carbon intensive. This emergency capacity, while having the advantage of a strong reliance on emergency power has pushed up operating costs sharply increasing small industry and households' electricity tariffs to US Cents 18 per KWh and US Cents 16 per KWh respectively in 2019. As a result, lead shedding occurs frequently in Kenya, particularly during the

dry season. This situation has underscored the need to diversify sources of power supply.

The plant aims to satisfy the rapidly growing demand for electricity, while diversifying sources of energy supply. To ensure the success of the plant, a lot of activities went into the planning stage which started by purchasing the land parcel where the plant would be located, followed by clearance of the land, then construction of the power house – installation of boilers and condenser as well as other related buildings. Once operational, the plant run continuously and its estimated that decommissioning would take more than 30 years into the future.

Population in Nairobi and Kiambu County are the direct beneficiaries where more approximately 500 people secured employment during the construction and approximately 50 people work in the plant currently. The project provide reliable power that encourages economic growth by helping address Kenya's current and projected energy shortfall.

Required:

a) Define the following terms as used in planning and appraising Thika Thermal Power Plant **(5 Marks)**

   i. Outputs
   ii. Inputs
   iii. Goal
   iv. Purpose
   v. Outcomes

b) As one of the Capacity investment plants, Examine five reasons why Thika Thermal power project need to create a Cash flow budget **(5 Marks)**

c) The manager at Thika Thermal Power project is considering the evaluation of its project to decide on whether to expand the project or not. He has approached you as an expert in project management. Describe the steps you would use to evaluate if you preferred to apply Contingent Valuation Method **(5 Marks)**

d) Being high cost and labor-intensive project, planners for Thika Thermal power project would evaluate the project risk which can be classified according to the sources. Discuss **(6 Marks)**

e) For sustainability of Thika Thermal Power Project, the manager needs to consider analysis of the factors which would lead to environmental degradation. Examine six measures which they need to take to prevent environmental impacts **(6 Marks)**

f) Explore the following types of compensation measures that Thika Thermal Power project may use as a remedy to repair, reinstate, restore or rehabilitate the environmental impacts **(3 Marks)**

i. On-site compensation measures

ii. Off-site compensation measures

iii. Out-of-kind compensation

QUESTION TWO

a) The success of any development project required project manager to lead the rest of the team to deliver quality deliverables on time, within the budget and ensure all the stakeholders are satisfied. Evaluate any five characteristics which a good project manager would be identified with **(5 Marks)**

b) Analysis of the information related to the gender for all the stakeholders and shareholders of the project increases the chances of the success of the project. Evaluate any five key components of Gender Analysis **(5 Marks)**

c) Different concepts are applied in project risk and uncertainty analysis to determine the viability of an idea. Examine the application of the following concepts **(5 Marks)**

i) Scenario Analysis

ii) Sensitivity analysis

iii) Switching values

iv) Distributional Analysis

v) Cost Utility Analysis (CUA)

QUESTION THREE

a) The performance of any project is influenced by the various stakeholders. Moreover, the project activities influence its stakeholders. Describe the steps involved in stakeholder analysis **(3 Marks)**

b) A project cycle starts with project planning; after identification, where the managers clearly define the problem at hand and consequently come up with output, outcomes and project goals. Examine any five project planning techniques which can be adopted **(5 Marks)**

c) Project selection is the process of evaluating individual projects or groups of projects, and then choosing to implement some set of them so that the objectives of the parent organization will be achieved. Explain any four non-numeric and three numeric methods of project selection **(7 Marks)**

QUESTION FOUR

a) Matters of technical, institutional, financial, economic and environmental aspects are key during the project appraisals to enable acceptability of the undertaking by the stakeholders and to create ownership to the intended beneficiaries. Discuss **(5 Marks)**

b) At the beginning of year one Tata Construction company has incurred a cost of $ 15,000 to buy a new machine. From the use of the machine in the construction of new houses, the manager hopes that the net cash flows over the next five years would be:

Year	1	2	3	4	5
Cash Flow ($)	(15,000)	1,500	2,750	4,000	5,700

You are required to calculate the net present value assuming a 15% cost of capital **(5 Marks)**

c) Assuming you have been hired by Abdi construction project as a consultant. They are deliberating on starting a real estate at Kitengela outcast and you have been assigned to conduct the Cost Benefit Analysis. Describe the steps involved in conducting Cost Benefit Analysis **(5 Marks)**